

WBS CODING SCHOOL

Software Engineering & AI

One-year program

- 100 % online, full-time
- 10 months of live lessons
- English or German
- 2 months internship

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Why choose Software Engineering & AI?

Our lives are becoming more and more digital, and software is the key to how we interact with this digital world. Artificial Intelligence is the most powerful new tool in this landscape. **Software Engineering & AI** gives you the opportunity to create innovative applications and integrate intelligent systems that make everyday life easier for millions of people. It's not just about writing code – it's about shaping technology to make it smarter, faster, and more human. From elegant user interfaces to intelligent, AI-powered backend systems, you'll learn how to design solutions that truly make a difference.

A key role in the digital world

Software Engineering & AI specialists are the "architects" of our digital future. They design and build software that simplifies lives, boosts efficiency, and drives innovation. With a strong grasp of data structures and algorithms, they create solutions that are not only effective but also efficient.

Practical applications

Whether you're building intuitive apps for everyday use, powerful platforms for businesses, or complex IT systems for the healthcare sector – Software Engineering & AI is as versatile as it gets. Frontend Engineers create user interfaces that are fun and easy to use, while Backend Engineers power the technology behind the scenes. Together, they enable digital solutions that make our lives simpler and better.

Promising career opportunities

The digital transformation is here – and it's only growing. Software Engineering & AI specialists are in demand across nearly every industry, from start-ups and tech giants to traditional companies making the leap into the digital age. Jobs like Full-Stack Developer, Frontend Specialist, or Backend Engineer are among the professions with great future prospects.

That’s why you belong here

Personal guidance and interactive learning formats

Our teaching approach combines personalized support with **dynamic live group sessions**. An instructor is available every day to assist you, and most days include live lessons to keep you actively engaged.
Regular **one-on-one meetings** give you the opportunity to clarify individual questions directly with your instructors and receive tailored guidance. Additionally, **live workshops** ensure you deepen your understanding and stay connected to the course content.



Level up with AI support!

Meet **NOVA (Next-Gen Online Virtual Assistant)**: the new chatbot designed to assist our students on their learning path. NOVA helps you find answers to your questions while guiding you to understand the how behind the solution. A smart sidekick, always by your side throughout your course!

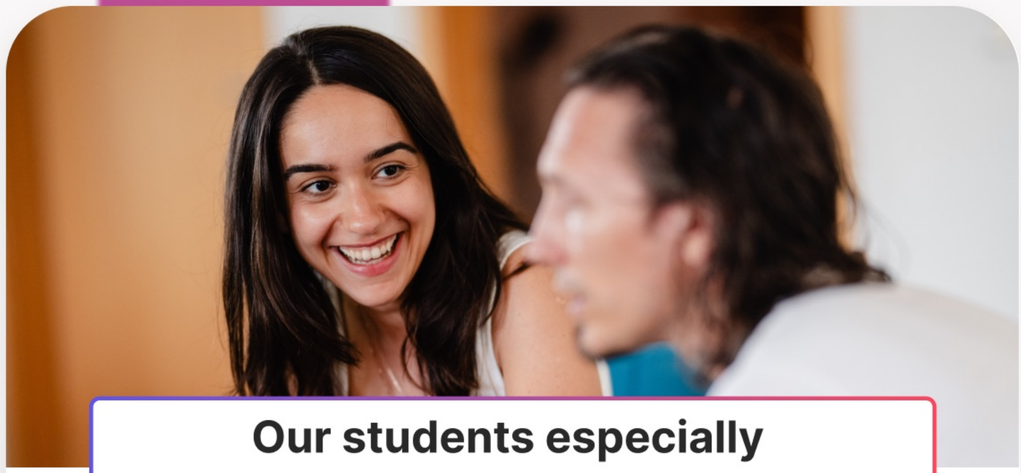
What can I expect in the course?

In our course, you'll learn the essential techniques and tools that Software & AI Engineers use every day – from your first steps in **Python** and computer science fundamentals to working with **databases** and **Flask**, all the way to building complex backend **applications with C# and .NET**. We'll dive deep into frontend development, giving you solid skills in **HTML, CSS, and JavaScript,** so you can create intuitive, user-friendly interfaces with **React**.

You'll also gain a strong understanding of Generative AI integration – from prompt engineering to building multi-agent systems. Whether you're just starting out or already have some experience, our curriculum covers everything you need to launch your career as a Software & AI Engineer with confidence.

What makes this course special?

This program stands out due to very comprehensive content in the field of Software Engineering & AI, daily contact with instructors, personalized support, and practice-orientated projects.



Our students especially benefit from:

- **10 hands-on projects:** A focus on practical projects rather than just theoretical knowledge.
- **2 external certifications:** Microsoft Azure Fundamentals (Cloud) and PCEP Python (Programming) – carefully selected and relevant to the industry.
- **Focus on teamwork:** Learning in groups to simulate real-world work environments.



How do I learn in the course?

Project-based learning is at the core of what we do. You'll tackle real-world challenges and solve problems just like in a real company. This includes:

- **Group work** to strengthen teamwork skills
- **Lessons** to teach you the basics
- **Live-coding sessions** and correction sessions to directly apply and improve your knowledge
- **Exercises and workshops** to strengthen your understanding
- **Independent study** to manage your own progress and really absorb the material

Learning methodology

Our goal is to prepare you for your entry into the tech industry with a modern learning approach. That's why **we combine hands-on learning with dedicated personal support**.

You'll start by building your theoretical knowledge at your own pace – with the help of high-quality video lessons, self-guided projects, and our **AI assistant NOVA**, who's available to support you 24/7. Then, we'll use our time together with instructors for what matters most: putting your skills into practice.



Instead of long lectures, you'll join **short, interactive live sessions** where you can get your questions answered and collaborate on projects in a team setting. Our instructors act as personal mentors, offering you tailored feedback and guidance. This dynamic approach ensures you'll be well-prepared for the many challenges of the job market.



A special bonus: **All live sessions are recorded**, so you can revisit lessons any time and strengthen your understanding. These recordings are a valuable resource to complement your learning, but they're no substitute for active participation and meaningful interaction in the live sessions.

Learning and collaboration: our digital tools

Learning Management System (LMS)

Our intuitive LMS is your go-to platform for all learning materials, assignments, and projects. It keeps you on track and makes managing your studies a breeze. Whether you're working independently or collaborating with your team, our LMS supports your every step.

Slack – your team messenger

Slack is where all the magic happens! It's our central tool for communication and collaboration. Connect with your instructors, ask questions, and get the support you need. Plus, Slack lets you network with fellow participants, share ideas, and work together on exciting projects.

Google Meet – for your video calls

Google Meet is our go-to tool for virtual meetings and video calls. With high-quality video, clear audio, and screen-sharing capabilities, Google Meet makes collaboration easy and keeps you connected with us.

Syllabus

Computer Science (12 weeks)

1 week

Computer science fundamentals

In this module, we'll give you a solid foundation in the core principles of computer science. You'll learn how to tackle complex problems efficiently and lay the groundwork for more advanced topics in software development.

2 weeks

Python basics

You'll start with an in-depth introduction to Python. Learn about syntax, data types, control structures, functions, and error handling, so you can write and debug your first simple programs.

3 weeks

Linear data structures

Learn all about basic data structures like arrays, linked lists, stacks, and queues. You'll discover how they are implemented and where they are used. Plus, dive into algorithms like sorting, searching, and recursion.

3 weeks

Non-linear data structures

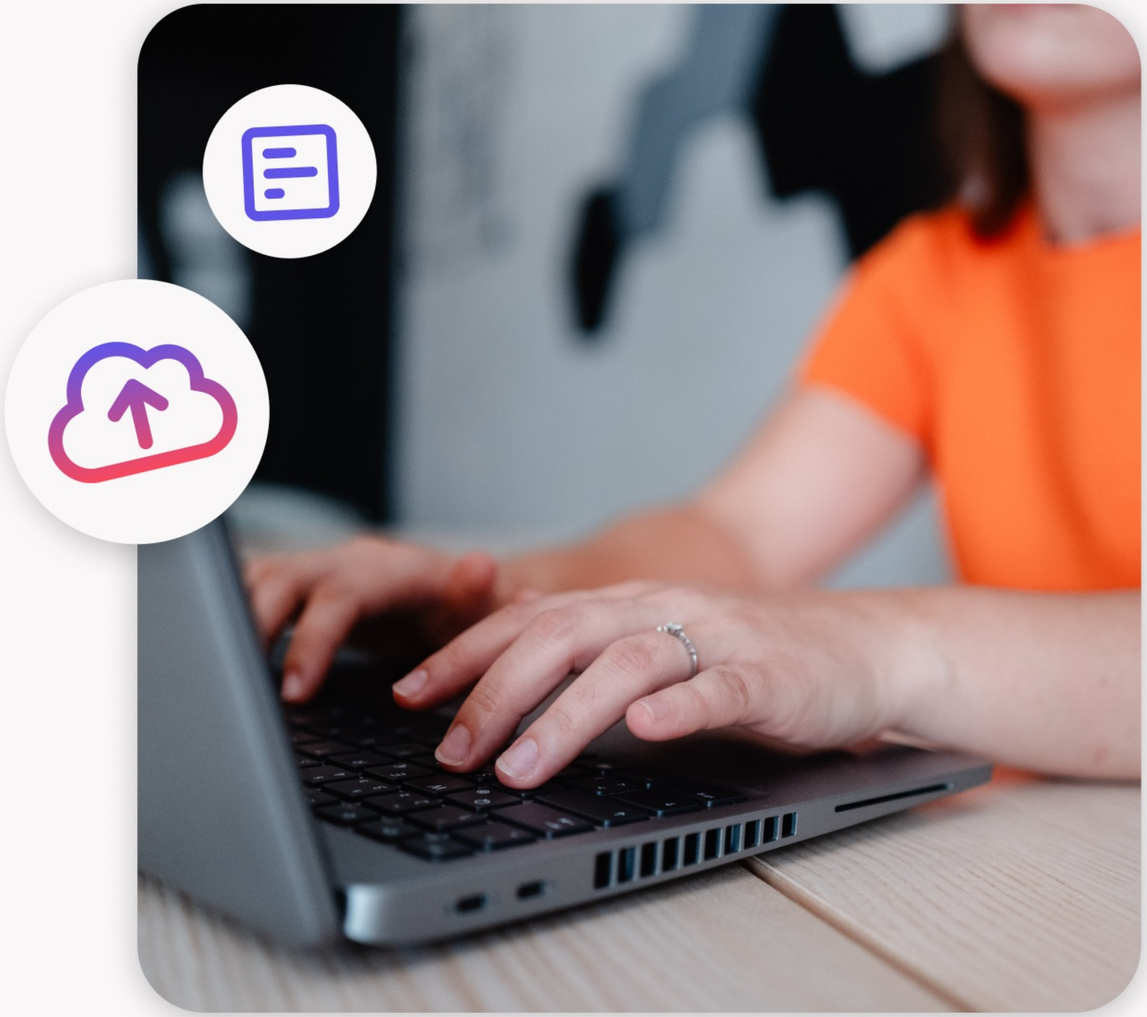
In this module, you'll explore more complex data structures like trees, graphs, hash tables, and heaps. Learn how they work and how they're applied in real-world scenarios. You'll also dig deeper into algorithms like dynamic programming and graph algorithms.

Computer Science (12 weeks)

1 week

SQL and Flask

In this module, you'll be introduced to working with relational databases: learn how to write SQL queries, understand database design, and get hands-on experience with Flask for building web apps and APIs.



2 weeks

PCEP training

Prepare for the PCEP certification by diving into advanced Python concepts like object-oriented programming, modules, and file handling. The goal is to equip you with the skills to handle more complex projects confidently.

Frontend Engineering (12 weeks)

2 weeks

Web development fundamentals

Get started with HTML and CSS, and learn how to use version control systems like Git and GitHub. This module gives you the first tools needed to build web applications.

1 week

Introduction to JavaScript

Dive into the fundamentals of JavaScript and gain essential skills for building dynamic web applications.

1 week

The web browser: DOM and web APIs

Explore how to work with the Document Object Model (DOM) and use Web APIs in browser environments. Learn how to design software components and specify interfaces.

1 week

JavaScript modules

Deepen your knowledge of modern JavaScript techniques based on the latest ECMAScript standards. You'll learn how to analyze, design, and develop software projects efficiently.

Frontend Engineering (12 weeks)

2 weeks

Software development with React

This module introduces you to building modern user interfaces with React.js. You'll learn to analyze requirements, create designs, and implement complex web applications.

1 week

Introduction to TypeScript

Gain a solid understanding of TypeScript and its advantages. Learn about type systems, annotations, interfaces, and generics to write more reliable and maintainable code.

1 week

Testing frontend applications

This module covers testing methods like unit and integration testing. You'll learn how to write automated tests to ensure your applications are robust and reliable.

2 weeks

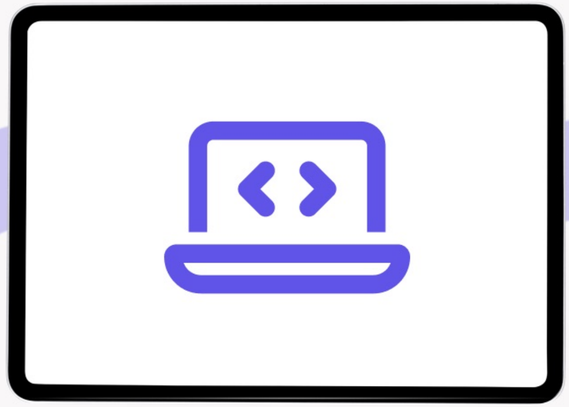
Advanced React and meta frameworks

Master data fetching, rendering strategies, and frameworks like React Router and Next.js to take your frontend development to the next level.

1 week

TypeScript in the context of React applications

Dive deeper into TypeScript for React: learn how to type components, hooks, and state to build robust, scalable frontends.



Backend Engineering & AI (12 weeks)

2 weeks

Introduction to C#

Get to know the fundamentals of C#, including syntax and object-oriented principles. Develop robust and efficient applications across different environments.

2 weeks

ASP.NET: RESTful APIs

Develop scalable APIs with ASP.NET while learning RESTful principles, security considerations, and optimization techniques for building high-performance backend systems.

1 week

Testing backend applications

In this module, you'll learn how to plan and implement secure web applications. You'll test authentication and authorization workflows and implement continuous delivery.

1 week

Generative AI and integration

Master prompt engineering and direct interaction with Large Language Models (LLMs). You'll learn how to efficiently leverage these models via APIs and seamlessly integrate them into your software.

Backend Engineering & AI (12 weeks)

1 week

Model context protocol for developer workflows and application integration

Extend LLMs with inference-time context to enhance developer workflows and improve AI-assisted coding using tools like GitHub Copilot.

1 week

Multi-agent architectures, tool usage, and autonomous workflows

Learn how to design, implement, and manage systems with multiple AI agents and leverage tools like LangFlow to build autonomous, intelligent workflows.

1 week

AI agent communication and no/low-code frameworks

Explore how AI agents communicate and collaborate, and get hands-on with no- and low-code frameworks such as LangFlow and n8n to accelerate integration and automation.

1 week

ASP.NET: microservices and Docker

Learn how to design, build, and deploy microservices with ASP.NET and Docker containers – perfect for scalable and maintainable architectures.

2 weeks

Cloud computing with Azure

Master the basics of cloud computing and work with Microsoft Azure. You'll learn to deploy, manage, and optimize applications in the cloud, plus get ready for the Microsoft Azure Fundamentals certification.



Final project (4 weeks)

4 weeks

Final project

Our **Software Engineering & AI final project** is where everything you've learned comes together – and where you prepare for the next steps in your journey. This project not only helps you tackle real-world challenges but also lay the groundwork for your internship and ongoing job search.

Examples of past projects include **e-commerce platforms, navigation systems, booking websites, and games**. While these examples highlight the range of possibilities, you're not limited to these topics. The choice is yours to explore a project that aligns with your passions and career goals, giving you the freedom to showcase your unique skills and creativity.

This hands-on project is more than just a coding exercise – It's a chance to experience how software engineering drives impact across industries. Along the way, you'll sharpen your skills with tools like Python, C#, and JavaScript while also honing the **problem-solving and communication skills** essential for your career.



A portfolio that stands out

By the time you complete your project, you'll have a **portfolio-ready** piece that not only demonstrates your expertise but also prepares you to excel in your internship, job search, and beyond.

Course technologies

Python
A versatile programming language used for web development, data analysis, and automation, with a ton of useful libraries.

SQL
A language for efficiently managing and querying relational databases.

HTML/CSS
The building blocks of web development, used for creating and styling websites.

Git/GitHub
Tools for version control and collaboration, helping you track and manage changes in your code.

JavaScript
The core language for building dynamic and interactive web applications.

TypeScript
An enhanced version of JavaScript with a type system, improving scalability and maintainability.

Playwright
A framework for end-to-end testing, ensuring the reliability of web applications.

C#
An object-oriented programming language for building desktop, mobile, and web applications.

ASP.NET
A framework for building robust web applications and services using C#.

Azure
A cloud platform offering scalable services for hosting, deploying, and managing applications.

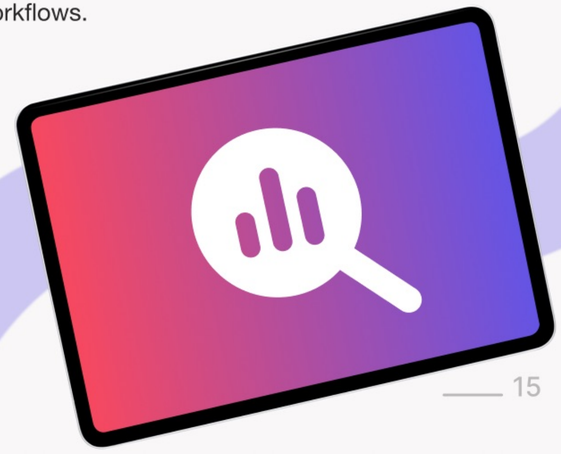
OpenAI SDKs
Developer interfaces for seamlessly integrating OpenAI models into applications. The Standard SDK provides access to language, image, and analysis capabilities, while the Agents SDK offers tools for building interactive, agentic AI systems.

LM Studio
A local platform for running and testing Large Language Models (LLMs) directly on your machine—ideal for development, experimentation, and offline AI workflows.

Copilot (VS Code)
An AI-powered developer tool that provides real-time code suggestions, autocompletion, and debugging tips to accelerate the coding process.

MCP (Model Context Protocol)
An open protocol for securely connecting external tools and data sources to AI models, enabling enhanced capabilities and integrated workflows.

N8N / Langflow
Visual automation platforms that enable the creation of complex data flows, AI pipelines, and integrations without extensive programming.



Certifications that open doors

Throughout our course, you'll have the opportunity to earn several recognized certifications online, which officially validate your skills.

These external certificates are valuable proof of your technical skills and make you especially attractive to employers. Additionally, you'll receive a completion **certificate from WBS CODING SCHOOL**, confirming your successful participation in the course. Your **personal portfolio** – filled with impressive projects you create during the course – not only shows what you've learned but also demonstrates how you can apply your knowledge in practice.

With these certifications and your portfolio, you'll be perfectly positioned to kick-start your career in the tech industry!



AZ-900 Microsoft Azure Fundamentals

proves your basic knowledge of Microsoft Azure and cloud computing.



PCEP Python Entry-Level Programmer

your entry into the world of programming.



Important information about the internship

- The internship is an official part of our AZAV-certified program.
- Participants receiving unemployment or social benefits (e.g. Bürgergeld) will continue to receive support during their internship.
- Any income you earn from the internship must be reported, as it could affect or reduce your government benefits.

Guaranteed internship: your bridge to the real world

An internship is the perfect way to connect theory with practice and gain valuable hands-on experience in the tech world. At WBS CODING SCHOOL, we actively support you in finding the right opportunity—whether through our extensive partner network or personalized guidance. Not only will you develop your practical skills, but you might even lay the foundation for a future full-time position.

- **Comprehensive support in finding an internship:** Our Career Services team provides tailored advice and valuable tips, and you can also leverage our partner network.
- **Guaranteed internship placement:** If you don't secure a position through your own efforts, we guarantee you an unpaid spot at one of our nonprofit partner organizations.
- **Real-world experience:** Apply your knowledge in a real work environment and start building your professional portfolio.

DocMorris – Experience that counts:

Many of our students have completed their internships with **top-tier partners** like **DocMorris,** adding a major highlight to their resumes and building a **strong foundation** for their tech careers.

Your tool for success:

free MacBook Air

At WBS CODING SCHOOL, we want to set you up for success – and that starts with the right equipment. As a participant in our 12-month **Software Engineering & AI** program, you'll receive a powerful MacBook Air.

What makes this offer so special?

- **It's yours to keep:** The MacBook Air is yours after successfully completing the course.
- **Top-tier technology:** A sleek 13-inch MacBook Air with Retina display and the lightning-fast M4 chip – perfect for tackling challenging projects.
- **Completely free:** No hidden fees or deposits required.
- **Delivered on time:** Your device arrives before the course begins, so you're ready to hit the ground running. However this may vary for students living in rural areas.



Equipped with this high-performance device, you're ready to excel.
Leverage one of the industry's finest tools and begin your journey to success!



Team support: we're here for you

At WBS CODING SCHOOL, you're never on your own. Our dedicated team supports you every step of the way.

Operations team

The Operations Team ensures that your course runs smoothly. Whether it's organizational questions, technical challenges, or anything else – our team handles all the details.

Career services

Our Career Services team is here to kickstart your journey into the working world. We'll help you level up your application materials, get you interview-ready, and share valuable tips to ace your job search.

Admissions team

First, you'll meet our Admissions Team. They'll guide you through the entire application process, answer your questions about course content, financing, and entry options, and help you to achieve your goals.

Community team

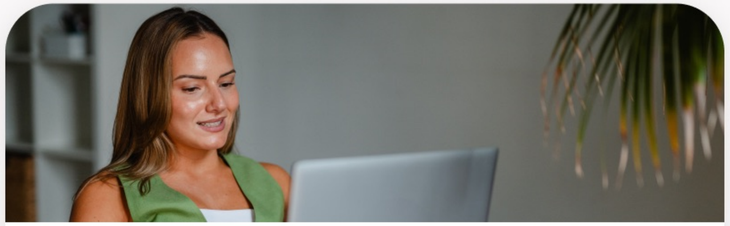
The Community Team makes sure you feel part of our vibrant community, even online. With regular events, networking opportunities, and an active Slack community, we encourage interaction and connection – both during the course and beyond.

Instructors

Our instructors are not only experts in their fields but also passionate educators. They'll be there for you throughout the course, helping you unlock your full potential.

Career support for your dream job

We support you on your journey into the tech world: from personalized career advice to exciting events. Your success is our goal – during the course and beyond!



Career service

Our career service helps you present yourself in the best possible way – not only during your studies but also up to 12 months after graduation! From optimizing your resume to targeted interview preparation, we're here to support you.



Events

Use our events to make valuable connections in the industry. For example, at our Alumni Talk, former students share how their careers have progressed after the course – a perfect opportunity to gain insights and learn from real experiences.



Partners

With strong roots in the Berlin tech scene and close ties to companies and industry experts, we offer you a network that makes it easier to enter the job market. Our partners are always on the lookout for talent and exciting projects – and you can benefit from that!

Job market and prospects

The IT industry is booming – and so is the demand for skilled professionals. By 2026, the number of software developers in Germany is expected to rise by nearly 50%, but the need is growing even faster. The skills gap in this field alone could grow to nearly 7,000 unfilled positions. And when it comes to IT professionals in general, the outlook is even more dramatic: according to Bitkom, around 663,000 IT specialists will be missing by 2040.

No surprise, since digitalization is a major driver of growth across all industries.

Companies are urgently looking for experts to develop innovative solutions – from AI-driven logistics and cloud computing to real-time applications.

For you, this means your skills are in high demand, and the opportunities are endless. With a qualification as a Software & AI Engineer, you'll be entering an industry with excellent prospects and long-term career potential.

Sources:
So sieht der IT-Arbeitsmarkt 2025 aus (get in IT)
Berufe mit dem größten Fachkräftemangel bis 2026 (IW)
Dramatische Verschärfung des IT-Fachkräftemangels (Bitkom e. V.)



Potential Career Paths

Full-Stack Software Developer

average salary of €55,700 per year in Germany

What do you do on the job? Develop web applications, optimize backends, write clean, testable, and maintainable code, deploy applications, explore new technologies, integrate them into projects, collaborate with other teams, and ensure quality assurance.

Cloud Solutions Engineer

average salary of €63,500 per year in Germany

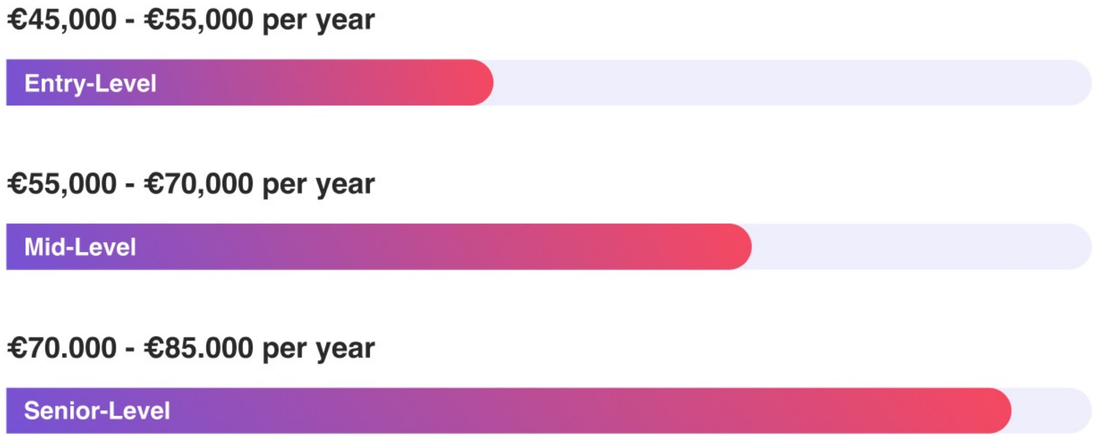
What do you do on the job? Build cloud solutions, design microservices architectures and containerized applications, ensure availability, work closely with development and operations teams, optimize costs, troubleshoot issues, and stay updated on the latest cloud technologies.

Front-End Engineer

average salary of €50,900 per year in Germany

What do you do on the job? Create user interfaces, collaborate with backend developers, write frontend components, test code, optimize applications, keep up with frontend trends, and conduct design and code reviews.

Salary range for Software Engineers in Germany



Source: Glassdoor, Kununu

WBS CODING SCHOOL

Your entry into the tech world

Since 2019, we've been dedicated to transforming ambitious learners into tech industry professionals. Our online courses in AI, Data, UX/UI, and Web Development are designed to meet the fast-paced demands of today's job market. Guided by expert instructors, students learn by doing – building the confidence to tackle the challenges of a dynamic tech industry.

But we're more than just tech training. We're a community built on inclusivity, empowering the innovators of tomorrow through personalized support, hands-on projects, and a focus on skills that make a real impact. Together, we're shaping a tech industry that's diverse, accessible, and ready for the future.

WBS GRUPPE – our strong roots

As part of the renowned WBS GRUPPE, one of Europe's leading providers of professional development, we benefit from over four decades of experience and an extensive network.



WBS CODING SCHOOL in numbers

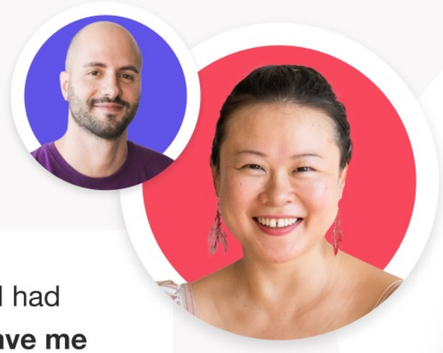
40+ years of experience from the WBS GRUPPE

2019 - founded as part of the WBS GRUPPE

2,000+ graduates

280+ WBS locations

What our alumni say



"I remember spending around 1 month researching coding schools in Germany. I had around 5-6 different calls in total. Well when i finished them **only one of them gave me a good feeling - WBS**. I decided to trust them and then immediately prove me that my choice was right."

★★★★★ **Stan, Web & App Development Graduate**

"For years I was wanting to change my career and move into software [...] I found this **amazing school**. I really wish I could give this place more than 5 stars cause they deserve it!!"

★★★★★ **Jared Boyd, Web & App Development Graduate**

Course Report
4.8/5 Stars
★★★★★

Switchup
4.9/5 Stars
★★★★★

Google
4.9/5 Stars
★★★★★

Trustpilot
4.5/5 Stars
★★★★

Where our alumni work:

accenture, aws, BASF, facebook, Lufthansa, Mercedes-Benz, SHARENOW, TESLA, Toyota, DB, SAP, zalando, Klarna, Meta, Lieferando

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