

Amirali Iranmanesh

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EDUCATION

Constructor University

Bachelor of Science in Software, Data and Technology

Bremen, Germany

Sept. 2024 – May 2027

- Awarded the competitive JetBrains Full Scholarship (2024–2027).

EXPERIENCE

Software Engineering Research Intern

JetBrains, Education Research Team

June 2025 – Aug. 2025

Berlin, Germany

- Refactored KOALA plugin to improve modularity, readability, and maintainability.
- Developed server-side UI with Spring Boot, integrating JSON-based config management and unit tests with JUnit.
- Dockerized backend services and migrated local configs to AWS S3 for automated generation.
- Added KOALA plugin features for granular, privacy-aware data tracking to improve precision and flexibility.
- Collaborated on research tasks, contributed to workshop material, and produced a project demo video.

Teaching Assistant, Scientific Programming with Python

Constructor University

Sept. 2025 – Present

Bremen, Germany

- Developed auto-graded GitHub Classroom assignments and mentored students in debugging.
- Prepared exercises in scientific computing topics, including NumPy, pandas, and Matplotlib.
- Held seminars to mentor students and reinforce key programming concepts.

Research Assistant, Stabilizing Structures

Shahid Bahonar University of Kerman

June 2023 – Sept. 2023

Kerman, Iran

- Modeled earthquake-resistant arcs by applying trigonometry and physics to lateral force simulations.
- Developed Python algorithms with NumPy and Matplotlib, adding Excel and graphs to enhance usability.
- Mentored peers in programming, enabling collaborative debugging and research contributions.

PROJECTS

Smart Assess — Exam Analysis Platform | *Python, Flask, Google Gemini API, PyPDF2, Jinja2*

2025

- Built a Flask-based web app for professors to upload exams, manage keys, and analyze results.
- Integrated Google Gemini Vision API for OCR and implemented error-pattern clustering with PDF highlighting.
- Generated detailed per-student and class reports with automated workflows for actionable feedback.

Gene Knowledge Web Service | *Python, Flask, Plotly, Pandas, NumPy, LangChain, OpenAI API*

2025

- Built an interactive Flask-based platform to analyze protein activity differences in aging research.
- Developed volcano plots, boxplots, and responsive UI with Plotly for dynamic visualization.
- Integrated PubMed APIs and AI-enhanced gene summaries using LangChain and OpenAI.

BreakpointTracker — IntelliJ Plugin | *Kotlin, IntelliJ Platform SDK, Gradle*

2025

- Developed an IntelliJ plugin to track and list breakpoints in real-time within a custom tool window.
- Supported multiple breakpoint types with seamless IDE integration.
- Implemented efficient navigation and packaged with Gradle for deployment on IntelliJ IDEA.

AWARDS & ACHIEVEMENTS

Placed in the top 1% of students nationwide in Iran.

Top 15% in International Olympiad in Informatics (IOI) – First Round.

Perfect SAT Math score (800) with a total SAT score of 1480.

Ranked 1st in Code Up's C++ Programming Contest and Animation branch of Visual Programming Competition.

TECHNICAL SKILLS

Languages: Python, Kotlin, C, C++, SQL, JavaScript, HTML/CSS

Frameworks: Spring Boot, Django, Flask, FastAPI, Bootstrap

Developer Tools: Git, Docker, AWS S3, IntelliJ IDEA, PyCharm, VS Code, Jupyter

Testing & CI/CD: JUnit, PyTest, Gradle, GitHub Actions

Libraries: NumPy, Pandas, Matplotlib, Plotly, LangChain/LangGraph, scikit-learn