

Alaa Mohamad

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EDUCATION

American University of Beirut

Bachelor of Science in Computer Science

Beirut, Lebanon

Aug. 2023 – May 2026

EXPERIENCE

Software Engineering Research Assistant

University of Illinois Urbana-Champaign

May 2025 – Present

Remote

- Conducted Research in software Testing and LLMs specially on Automated Program Repair Agents- Test Automation -Test Case Prioritization and Flaky Tests and built large Bug Datasets.
- Submitted a Paper that is currently under review for ISSTA 2026 Conference.

Technical Intern

Middleware Data Systems

June 2025 – Aug. 2025

Beirut, Lebanon

- Developed and tested AI models for image generation
- Explored deep learning and generative model techniques (GANs, diffusion)
- Preprocessed datasets and optimized model performance for clearer outputs
- Gained hands-on experience in Python, Pytorch, and AI image generation workflows

Web Development Intern

Outlook Newspaper at AUB

March 2025 – June 2025

Beirut, Lebanon

- Built and maintained frontend pages using React, including category management and user administration interfaces
- Implemented and linked full post workflows (frontend + backend integration), improving content publishing reliability
- Collaborated with the editorial/tech team to streamline UI flows, fix bugs and ensure a consistent, responsive user experience

PROJECTS

Linux Kernel Project

- Implemented a new system call that tracks and counts system-call invocations, integrating directly into the kernel syscall table
- Added a login prompt that runs before the shell, updating the OS startup sequence to enforce user authentication and improve system security
- Developed a custom pwd command that prints the current working directory by interacting with kernel-level process structures

AUBi - AI Chatbot for AUB Mediterraneo

- Built a chatbot for AUB Mediterraneo to answer student questions on admissions, visa requirements and student life
- Developed a React frontend and Node.js backend to handle user queries and integrate external APIs
- Integrated OpenAI API to generate accurate responses using official university resources

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS, R, GO

Frameworks: React, Node.js, WordPress, Material-UI, FastAPI, Spring Boot, Core, Django, Flask, Pytorch, TensorFlow, Numpy, Pandas, SkLearn, Pytest, JUnit

Developer Tools: Git, Docker, TravisCI, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, MongoDB, AWS Cloud, Linux, JIRA, Microsoft Azure.

Libraries: pandas, NumPy, Matplotlib, Playwright, Selenium

Cerifications: ISTQB Certified Tester, ISTQB Test Automation Engineer, AWS Cloud Practitioner