Sam Abou Zeid

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Education

American University of Beirut **2025 – 2028**
Bachelor of Science in Computer Science *Beirut, Lebanon*
- Clubs & Activities: 180 Degrees Consulting, ACM, CSSS

Experience

American University of Beirut **Oct 2026 – Present**
Research Assistant *Beirut, Lebanon*
- Contributing to AI-powered Cognitive Digital Twins modeling workers, robots, equipment, and construction activities.
- Integrating real-time sensor and operational data to support monitoring of changing construction environments.
- Investigating hazard recognition and risk prediction techniques to support proactive construction safety decisions.
- Exploring context-aware human–robot interaction for adaptive navigation and task execution around workers.

American University of Beirut **Oct 2026 – Present**
Technical Team Leader – Lebanon 2050 *Beirut, Lebanon*
- Leading the technical team of Lebanon 2050, an AUB initiative focused on Lebanon's long-term development.
- Exploring technology-driven approaches to national development challenges.
- Coordinating technical planning and interdisciplinary collaboration.
- Translating team ideas into actionable project concepts aligned with the Lebanon 2050 vision.

abzd **2025 – Present**
Co-founder *Europe & Middle East*
- Co-leading a software business delivering web, mobile, and SaaS products across Europe and the Middle East.
- Translating client requirements into product scope, architecture, and development priorities.
- Building, testing, and deploying software products from initial requirements through delivery.
- Managing client discussions, prioritizing features, and coordinating product decisions across software projects.

Maw3ad **2026 – Present**
Founder *Beirut, Lebanon*
- Building a booking platform from the ground up across 4 beauty and wellness categories.
- Designing 5 core workflows: discovery, guest booking, confirmation, cancellation, and appointment management.
- Leading sales, marketing, local business outreach, and partner onboarding.
- Using recurring scheduling challenges from business outreach to guide product improvements.

Selected Projects

PortWatch: Maritime Data Engineering | *Python, PostgreSQL/PostGIS, Prefect, dbt, Next.js*
- Building batch and live AIS pipelines, processing 114,940 canonical NOAA vessel positions across Los Angeles and Oakland for January 1, 2024.
- Analyzing 443,296 Los Angeles vessel positions across 7 days and 168 hourly records.
- Maintaining 11 SQL models with 36 passing dbt tests, verifying reproducible analytical outputs.
- Developing vessel maps, live monitoring, and event-time replay, preserving source gaps and separating observed positions from inferred visits.

Flux: Full Stack Fintech Platform | *React, TypeScript, Redux Toolkit, NestJS, PostgreSQL*
- Building 6+ multi-currency workflows for exchange, transfers, ledgers, payments, card authorization, spending limits, and live account updates.
- Keeping p95 latency below 150 ms (from over 800 ms) with caching, query improvements, and normalized state.
- Keeping the initial frontend bundle over 50% smaller through code splitting, lazy loading, and reusable components.
- Maintaining Jest, React Testing Library, and Cypress tests covering over 80% of financial workflows, validation, state changes, and failure cases.

Technical Skills

Languages: Python, TypeScript, JavaScript, Java, SQL, HTML, CSS
Frontend: React, Redux Toolkit, Next.js, Webpack, React Native, Jest, React Testing Library, Cypress
Backend & Data: NestJS, Flask, PostgreSQL, PostGIS, REST APIs, Prefect, dbt

Achievements & Leadership

- Best Debater Award
- Honorable Mention, "Glue" AI Public Speaking Event
- Class President and Representative
- Hack for Health Lebanon Participant
- Youth Programs Educator
- Fluent in Arabic and English