ALEXANDRE AMAT

Senior Software Engineer

CONTACT

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PROFILE

Experienced Software Engineer based in San Francisco, with remote enrollment at Westcliff University, Irvine. Eligible for CPT and OPT work permits. Expertise in C/C++, Python, JavaScript/TypeScript, and a strong background in full-stack development, IoT and Embedded Systems. Proven track record in leading cross-functional agile teams and optimizing software development processes.

SKILLS

C/C++, React, Python, JavaScript, TypeScript, SQL, FastAPI, Django, Linux, Docker, Git, Bash, IoT, Embedded, RTOS, Protobuf, Wireless Mesh, Agile, Scrum, CI/CD, GitHub Actions, Communication, Leadership, ARM, AVR

LANGUAGES

English	Bilingual proficiency (CPE)
Chinese	Full professional proficiency (HSK6)
French	Professional working proficiency (TCF B2)
Spanish	Native
Catalan	Native

REFERENCE

Yan-Ping Wang

CEO of iDRC
+86 150 2661 9725
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WORK EXPERIENCE

Creator/ Software Engineer
2023 - 2024

QuartOS

- Self-taught JavaScript, React, FastAPI, and PostgreSQL, leading to the development of an innovative fintech application
- Implemented automated data retrieval, multi-currency support, transaction consolidation, net worth, and monthly P&L features

Creator/ Software Engineer
2023

TinyRTOS

- Crafted a lightweight OS tailored for small embedded systems, with initial support for ARM and AVR architectures.
- Engineered a Hardware Abstraction Layer (HAL) to facilitate seamless interaction across architectures

Senior Software Engineer
2019 - 2022

Shanghai, China

iDRC

- Led the creation of an IoT product that leveraged wireless mesh to save up to 50% of energy in buildings
- Managed a cross-functional agile team of five developers
- Spearheaded design, development, documentation, and testing of the firmware, an embedded C application
- Overhauled SQL database, simplifying complex schemas and reducing manual provisioning by 35%
- Created unit testing infrastructure with a CI pipeline to reduce deployed bugs by 95%
- Designed protocol for device data and diagnostics using Protobuf, reducing message size by 37%
- Designed a web app to monitor the connectivity of IoT devices, showing real-time diagnostics
- Built a lab to monitor and debug 15 IoT devices at a time

Software Engineer
2018 - 2019

Shanghai, China

iDRC

- First employee, supported the CEO in creating company
- Utilized Unity to build a web app prototype to monitor and control buildings in under three months

Business Analyst
2016 - 2017

Barcelona,

Advanced Logistics Group (Indra)

- Provided consulting services in projects related to transport engineering, winning 75% of the bids

Research Intern
Summers 2016-15

Shanghai, China

The Walt Disney Company

- Developed a ML model for transportation demand based on census data, improving prediction accuracy by 12%
- Modeled design of structural steel based on genetic algorithms to reduce cost and total energy usage by 17%

EDUCATION BACKGROUND

MSc in Computer Science
2023 - 2025 Irvine, CA, US

Westcliff University

Remote full-time student on F-1, eligible for CPT and OPT work permits.

MSc in Civil Engineering
2014 - 2016 Barcelona, Catalonia

Polytechnic University of Catalonia

Grade: 8.6/10 - Computational Engineering, Numerical Modeling, Models for Decision Making and Optimization in Engineering

MSc in Arch. and Civil Engineering
2013 - 2015 Shanghai, China

Tongji University

Grade: 83.89/100. Specialty in Structural Eng.

BSc in Civil Engineering
2010 - 2014 Barcelona, Catalonia

Polytechnic University of Catalonia

Grade: 8.7/10, 16th rank. Numerical Modeling