Irtiza Khan

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US Citizen

Education

Stanford University — *Stanford, CA*
Postgraduate Studies, NDO — *Jan 2024 – Present*
Concentration: Software Systems

California State University, East Bay — *Hayward, CA*
Computer Science, B.S. (Cum Laude) — *Aug 2021 – Dec 2022*

Glendale Community College — *Glendale, CA*
Mathematics, A.S. (Dean's List) — *Aug 2018 – May 2021*

Work

Code In Place (Stanford University) — *Palo Alto, CA*
Teaching Assistant — *Apr 2024 – June 2024*

- *Technologies: Python*
- Facilitated in teaching an adapted version of Stanford's CS106A class for students from all backgrounds from across the world.
- Led weekly sections with students to cover foundational computer science concepts in Python through design discussions, pair programming, code reviews, and continuous feedback.

Citi Bank — *Palo Alto, CA*
Bank Associate — *Apr 2023 – Mar 2024*

- *Technologies: NBS (CRUD Transaction System), Eclipse (KYC System), Salesforce*
- Collaborated with team to manage operations for branch with over $392 million in assets.
- Facilitated cross-market transactions exceeding $1 million with in-house technologies and documentation.
- Communicated with cross-functional teams to resolve technical issues regarding financial transactions.

Formation Fellowship — *Remote*
Software Engineering Fellow — *Jun 2022 – Dec 2022*

- *Technologies: JavaScript, ReactJS, NodeJS, Python, Git*
- Mentored under software engineers to design large-scale systems, efficient algorithms, and robust software.
- Shipped 5-8 production-ready features and bug fixes for user access control to a large code base.
- Reduced 15% of redundant functions by refactoring the code base with proper ReactJS state management.
- Improved cost-efficiency by up to 40% by rate-limiting RESTful API calls and compressing data streams using GZIP.

NASA & CalTech (Jet Propulsion Laboratory) — *Pasadena, CA*
NCAS Scholar — *Nov 2019 – Jan 2020*

- *Technologies: Python, MicroPython*
- Modelled a 3D Mars rover for a research paper, leading to an on-site program of 40 scholars out of 2000 applicants.
- Competed among 5 teams to build a mock Mars rover to roam unsurveyed terrain and collect rock samples at Caltech's JPL (Jet Propulsion Laboratory).
- Took ownership over the mock Mars rover's entire code base, including features such as dead-reckoning navigation.
- Prevented total project failure by implementing emergency maneuver protocols that were successfully triggered.
- Awarded 'Most Valuable Person' award for impactful contribution to the team's success.

Projects

OpenAI Sponsored Hackathon: Emotionally Intelligent LLM — *San Francisco, CA*
Software Engineer — *Apr 2023*

- *Technologies: JavaScript, NodeJS, ExpressJS, Python, Flask, YAML, Bash, Git*
- Integrated emotional intelligence into ChatGPT by tailoring the model's responses with contextual data extracted from modalities like facial expressions.
- Locally analyzed facial expressions from a real-time stream using the MobileNet-SSD model (15m parameters).
- Reduced development time and 50% of calls to OpenAI by setting up automation tools and an intermediary server.
- Placed as finalists in 5th place out of 60 teams and 400 contestants.

Capstone Project: Enterprise Chat Application — *Hayward, CA*
Undergraduate Student — *Feb 2022 – May 2022*

- *Technologies: Java, JUnit, JSwing, Sockets, Threads, Serialization, Git*
- Created requirement documents, design documents, and sprint timelines by collaborating with the team and client.
- Built and exposed core functionalities for socket networking and chat UI to integrate with external systems.
- Streamlined development and reduced 30% of code by abstracting code into easy-to-use libraries for the entire team.
- Performed continuous unit/integration/system tests using an automated test suite for the project life cycle.

Skills

- **Backend & Data:** Python, Flask, SQL, Tensorflow, Linux, Bash, AWS
- **Frontend & Mobile:** JavaScript/HTML/CSS, ReactJS, Swift
- **Systems & Performance:** C++, C, GDB, Valgrind
- **Others:** Git, Github