Ralfi Bahar

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EDUCATION

University of California, Berkeley — Berkeley, CA
Bachelor of Arts in Computer Science, Minor in Statistics — *Aug. 2023 – Expected Spring 2026*

EXPERIENCE

Software Engineer Intern — June 2024 – Aug 2024
Ordinatrum Health — *Lewes, DE*
- Developed different type of parsers to transform data collection from ICU devices to Raspberry Pi.
- Prototyped and compared the Elastic and Prometheus-Grafana Stack architectures for central server and system monitoring for 100+ active devices, caring for 250+ patients.
- Built custom dashboards from scratch for live resource and logging management.

Front-end Developer — Mar. 2021 – Dec. 2021
Morla Moves — *Amsterdam, Netherlands*
- Developed the front-end infrastructure of the application using React.js for pre-seed Alpha version of the product.
- Integrated a real-time feedback-giving AI model to user interfaces via API endpoints.

Software Developer Intern — Sep. 2020 – Oct. 2020
Inveon Software Company — *Istanbul, Turkey*
- Trained in mobile app development using React Native, focusing on end-user engagement.
- Developed interactive features and components for e-commerce mobile applications for Watsons and Bizim Toptan, enhancing the user experience on home, product, and settings pages.
- Implemented an analytics system to track user behavior and engagement, resulting in a 17% increase in user retention and a 5% improvement in app performance through data-driven optimizations.

PROJECTS

Guidin.AI - Co-Founder | *Python, LangChain, TensorFlow, OpenAI, Flask, Pinecone*
- Developing an intelligent support bot utilizing a hybrid Graph and Vector-based Retrieval-Augmented Generation (RAG) approach to enhance information retrieval and user interaction.

Blackjack Simulator | *Next.js, React.js, Typescript, Python, AWS* — blackjack-sim.com
- Developed a full-stack web application using Express serving as a REST API and React as the front end.
- Simulated millions of blackjack games played with optimal strategy and card counting.
- Displayed final aggregated and mean statistics through charts.
- Implemented custom caching mechanism for large tasks with AWS S3.

Radio Classic Online | *Morning Delight: Live Music Program* — radyoklasik.online
- Founded an online classical music radio using technologies like Express, Icecast, React; host weekly live broadcasts for 1000+ monthly listeners.

RESEARCH

Cryptography and Quantum Computation Research | *Python, Qiskit, Cirq, Blockchain*
- Researched quantum-resistant cryptographic algorithms for blockchain security; developed a prototype using NIST algorithms (e.g., Crystals-Dilithium, Falcon) and assessed performance.
- Simulated cryptographic algorithms against quantum attacks using Qiskit and Cirq to demonstrate enhanced security measures.

TECHNICAL SKILLS

Programming Languages: Java, Python, JavaScript, Typescript, C#, HTML/CSS, SQL, PromQL, Bash
Frameworks: React, React Native, Node.js, Next.js, Express, Flask, FastAPI, Arduino
Developer Tools: Git, Docker, Ngnix, Google Cloud Platform, AWS, VMware, Digitalocean, VS Code, Jupyter
Libraries: Pandas, NumPy, Matplotlib
Monitoring and Logging Tools: Elasticsearch, Logstash, Kibana, Prometheus, Grafana

LANGUAGE PROFICIENCY

Languages: English (fluent), Turkish (native), Hebrew (beginner), French (beginner)