

Hilal Morrar

510-520-9271 | hilalmorrrar@gmail.com | U.S. Citizen
[linkedin.com/in/hilal-morrrar/](https://www.linkedin.com/in/hilal-morrrar/) | github.com/hamorrrar | hilalmorrrar.com/

EXPERIENCE

Software Engineer Intern

May 2024 – August 2024

Cisco Systems - Duo Security

San Francisco, CA

- Improved an internal performance testing tool by adding a feature using Python, AWS EC2, and MySQL to dynamically create simulated customers and generate realistic HTTP requests.
- Executed load testing suites with GitHub CI/CD pipelines to monitor and validate software release performance metrics using Datadog, Grafana, and Kibana dashboards for observability and incident response.
- Diagnosed and fixed deployment issues in Kubernetes clusters with Python and Docker YAML configurations, contributing to improved system reliability and reducing the risk of service degradation or on-call incidents.

Software Engineer Intern

May 2023 – August 2023

Stealth Startup

Remote

- Designed and implemented a REST API for a distributed, fault tolerant, consistent, and sharded key-value store using Go and Docker.
- Utilized Goroutines for concurrency when handling client and internal HTTP requests for system communication.
- Developed the resharding algorithm and internal API routes to support dynamic replica coordination and data rebalancing, and wrote Bash scripts to automate setup and teardown processes.

Machine Learning Engineer

September 2020 – August 2021

Applied Machine Learning Lab

Santa Cruz, CA

- Led the design and training efforts of various neural network model architectures to make predictions based on time-series data with PyTorch.
- Evaluated and tuned machine learning models using techniques like hyperparameter optimization, regularization, and pruning to achieve 95% accuracy.
- Improved data processing pipeline to distribute model training in a Kubernetes GPU cloud cluster to reduce training time by 50%.

Frontend Software Engineer

July 2020 – September 2020

Resilient Renewable Efficient Energy Systems

Santa Cruz, CA

- Built a user interface to register IoT devices using React, JavaScript, and AWS S3 for data storage in collaboration with hardware and product teams.
- Coordinated end to end integration with backend services on AWS EC2, ensuring smooth device onboarding and monitoring workflows.
- Enhanced user experience by optimizing data handling and client side input validation.

PROJECTS

Connect4 Artificial Intelligence Agent | *Python*

- Developed an AI agent for Connect4 using heuristic evaluation to simulate strategic gameplay across multiple player configurations.
- Programmed game state tracking and board evaluation algorithms to support turn-based decision making.
- Engineered gameplay framework to support modular AI, human, and random players for dynamic matchups.

EDUCATION

University of Texas at Austin

August 2023 – December 2024

Masters of Science, Computer Science

Austin, Texas

- Coursework: Artificial Intelligence, Database Systems, Distributed Systems, Prediction in Computer Architecture

University of California, Santa Cruz

September 2018 – June 2022

Bachelors of Science, Computer Science

Santa Cruz, CA

TECHNICAL SKILLS

Languages: Assembly, C, C++, Go, HTML/CSS, Java, JavaScript, Python

Frameworks/Libraries: Agile, Gin, Keras, NumPy, PyTorch, React, TensorFlow, pandas, scikit-learn

Developer Tools: Atlassian, Docker, Git, Jira, Kubernetes, Linux/Unix, MySQL, PostgreSQL, Slack, Terraform