Hilal Morrar

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Education

University of Texas at Austin August 2023 – December 2024
Masters of Science, Computer Science *Austin, Texas*
- Coursework: Computer Security, Database Systems, Distributed Computing, Operating Systems, Prediction in Computer Architecture

University of California, Santa Cruz September 2018 – June 2022
Bachelors of Science, Computer Science *Santa Cruz, CA*
- Cumulative GPA: 3.43, Dean's Honor List in Spring 2019, Summer 2020.
- Coursework: Artificial Intelligence, Machine Learning, Operating Systems, Software Engineering, Statistics

Experience

Software Engineer Intern May 2024 – August 2024
Cisco Systems - Duo Security *Remote*
- Improved an internal performance testing tool by adding a feature using Python, AWS, and MySQL to dynamically create simulated customers and generate realistic HTTP requests.
- Executed load testing suites on a simulated production environment to validate software release performance metrics using Argo Workflows, Datadog, Grafana, and Kibana dashboards.
- Identified and resolved several bugs in Kubernetes deployments, Docker containers, and documentation.

Computer Science Undergraduate Teaching Assistant September 2019 – June 2022
Baskin School of Engineering - Computer Science and Engineering Department *Santa Cruz, CA*
- Developed tutoring curriculum for Applied Discrete Math, Computer Systems and Assembly Language, and Introduction to Python courses.
- Students consistently rated my sessions at least 8/10 and noticed an average grade increase of 9%.
- Designed and graded weekly quizzes and Python assignments for Artificial Intelligence, Machine Learning courses.

Frontend Software Engineer July 2020 – September 2020
Baskin School of Engineering - Computer Science and Engineering Department *Santa Cruz, CA*
- Worked in an Agile team environment to build a device to monitor energy data in a residential network.
- Developed the frontend of a UCSC research lab website using React and JavaScript for UI/UX design.
- Connected frontend and backend to send, receive, and process user input for device registration via JSON.

Research

Applied Machine Learning Lab Research Assistant September 2020 – August 2021
Baskin School of Engineering - Computer Science and Engineering Department *Santa Cruz, CA*
- Contributed to two projects in cognitive electrophysiology and data science under Professor Narges Norouzi.
- Designed and implemented various convolutional neural network architectures to make predictions based on time-series data with PyTorch.
- Distributed model training in a cloud GPU cluster with Kubernetes to reduce training time by 50%.

Projects

Distributed Key-Value Store | *Go, Git, Docker* February 2023 – Present
- Developing the back-end API of a distributed, fault tolerant, consistent, and sharded key-value store.
- Utilizing Goroutines for concurrency when handling client and internal HTTP requests for system communication.

TagMe | *Electron, Go, Git, Node.js, HTML/CSS* January 2022 – March 2022
- Worked in an Agile team to make a cross platform, full stack desktop application to search files by custom tags.
- Responsible for UI and frontend functionality, designed and implemented backend unit tests in Node.js.

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: Docker, Git, Google Colabs, Jupyter Notebooks, Kubernetes, Linux/Unix