Hilal Morrar

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Education

University of Texas at Austin August 2023 – December 2024
Masters of Science, Computer Science *Austin, Texas*
- Coursework: Database Systems, Distributed Systems, 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: Algorithms, Artificial Intelligence, Data Structures, Machine Learning, 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 with GitHub CI/CD pipelines 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 to enhance DevOps stability while following best practices and participating in code review processes.

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.

Machine Learning Engineer September 2020 – August 2021
Baskin School of Engineering - Computer Science and Engineering Department *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
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 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.

Projects

Distributed Key-Value Store | *Go, Git, Docker* February 2023 – Present
- Developing the backend 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: Atlassian, Docker, Git, Jira, Jupyter Notebooks, Kubernetes, Linux/Unix, MySQL, PostgreSQL