Atharva Wandile

Boston, MA 02130 | Phone: (857) 340-7592

GitHub| LinkedIn | Website

Education

Northeastern University, *Boston, MA* **May 2023**

- Master of Science in Computer Science *GPA: 3.8/4.00*

Related courses: Algorithms, Parallel Data Processing, Reinforcement Learning, Data Mining

JSS Science and Technology University (SJCE), *Mysore, India* **Jan 2020**

- Bachelor of Engineering in Information Science *GPA: 9.14/10.00*

Related courses: Data Structures, Object-oriented programming, Machine Learning, Cloud Computing

Technical Skills

- **Languages**: Python, Java, C++, Golang, Scala, SQL, HTML, CSS
- **Tools and Technologies**: AWS (EMR, Athena, S3), MongoDB, Hadoop, Apache Spark, Redis, Docker, Kubernetes
- **Frameworks**: Tensorflow, PettingZoo, Flask, Django, JSwing, JUnit, Log4j
- **Libraries**: Pandas, Keras, PyTorch, Numpy, Matplotlib, OpenAI gym

Experience

Research Intern, Lab for Learning and Planning in Robotics(NEU), *Boston, MA* **May. 2023 – Present**

- Multi-Agent Reinforcement Learning: Developed continuous macro-action environments for Multi-Agent Reinforcement Learning. Analyzed and tested continuous macro-action PPO algorithm for robotics and autonomous systems.
- Hierarchical Reinforcement Learning: Achieved state-of-the-art performance by training agents using option-critic and actor-critic algorithms for centralized multi-agent reinforcement learning on four rooms and petting zoo MPE environments. (Link)

Software Engineer(Data Engineering), Redbus, *Bangalore, India* **Jan. 2020 - Jul. 2021**

- Big Data Pipelines: Improved customer retention by 10% through the design and implementation of big data pipelines, ETL and parallel processing models for customer life cycle management with cross-functional communication with marketing teams for analysis; leveraging AWS cloud and database technologies (MongoDB, Cassandra, Postgres).
- Distributed Parallel Processing in Spark: Slashed processing times by 200% for weekly and monthly statistical analyses implementing Spark programs on AWS platform, enhancing efficiency.
- Flask and Golang Web APIs: Developed low latency Flask and Golang API's handling millions of hits per second. Optimized legacy api's to cut down response time by 50%.

Machine Learning Intern, Allgo Embedded Systems , *Bangalore, India* **Jun. 2019 - Aug. 2019**

- Tracking Driver Actions: Led a research based project to identify activities of vehicle drivers given video input from dashboard cam and classify activities into distinct classes in realtime using computer vision and deep learning.
- Deep Learning and Computer Vision: Analysed and compared multiple models including 2 stream CNNs, LSTM and traditional CV techniques. Demonstrated final model with ability to correctly identify a smaller subset of actions with high accuracy up to 86%.

Software Engineer Intern, Edumerge Pvt. Ltd. , *Bangalore, India* **Jun. 2018 - Aug. 2018**

- Performance Prediction: Crafted a sophisticated regression model with 2% error margin tailored to anticipate the academic performance of a specific class. This model utilized historical performance data a from constrained dataset of 1000 students from the preceding batch and was particularly designed for proactive intervention. This precision contributed to data-informed decision-making and enhanced academic outcomes.

Projects

- **Distributed Real Time Collaborative Editor**: Developed responsive app for a distributed text editor (like google docs) that can support multiple users updating document in real-time and is fault tolerant by leveraging an architecture with data replication management and distributed transactions.
- **Distributed Hierarchical Agglomerative Clustering for Music Recommendation**: Evaluated distributed k-means clustering with average linkage clustering on Apache Spark using AWS EMR to group similar songs together from million song dataset for music recommendations.
- **Java MVC Dungeon Game**: GUI application created using Java Swing, that utilizes Kruskal's algorithm to construct a maze of caves and tunnels emulating locations of a dungeon, given certain configurations. A player must traverse through the dungeon by avoiding monsters, that they can smell from nearby locations, and reach the exit in order to win. The application applies design patterns like Strategy, Factory, Singleton,Dependency Injection etc.(Link)