Bharath Sreenivas

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Education

Carnegie Mellon University *Pittsburgh, PA*

Bachelor of Science in Computer Science, GPA: 3.96/4.0, Dean's List, High Honors *Aug 2019 to May 2023*

- Concentrations in Machine Learning, Computer Systems

Skills

Languages Python, C, C++, Java, JavaScript, Angular JS, SQL, Ruby, Standard ML, HTML/CSS, LaTeX, MATLAB

Tools PyTorch, Tensorflow, Pandas, ROS, Numpy, Flask, Unix Command Line, Git, AWS, GCP

Coursework Computer Vision, Operating Systems, Distributed Systems, Computer Networks, Database Systems, Intro to Deep Learning, Parallel and Sequential Data Structures and Algorithms, Principles of Functional Programming

Experience

Bloomberg *New York, NY*

Software Engineer *August 2023 to Present*

- Coming soon

Meta *New York, NY*

Software Engineering Intern, News Recommendations (ML) *May 2022 to Aug 2022*

- Engineered new dataset feature in **Python** based on user feedback (see more/see less/article hide), resulting in **10% increase in accuracy** of embeddings used in similarity-based news article candidate generation
- Implemented training sample demotion in pre-ranking logic for p(x-out) model based on user's "article hide" ratio, removing bias towards heavy users
- **Delivered a 3% increase in model AUC** and noticed improved precision and recall for light and medium user groups via online experimentation

Amazon Web Services *Seattle, WA*

Software Engineering Intern, Builder Tools *May 2021 to Aug 2021*

- Designed and implemented new service in **Java** and **Ruby** to support voting on comments in code review software used by all Amazon engineers
- Leveraged **DybamoDB Global Secondary Indices** to persist reaction data and implement data replication system that converts NoSQL data to relational DB for optimized voter statistic retrieval
- Extended UI using **Angular JS** to add reactions on comments, hitting **new REST API endpoints** on button click

Relativity *Chicago, IL*

Software Engineering Intern, Structured Analytics - Email Threading Team *May 2020 to Aug 2020*

- Used data analytics concepts to to optimize email review by arranging entire email conversations in sequence and identifying inclusive documents
- Used **C** and **Angular JS** to implement API's that improved workflows and enhance UI on production software

Carnegie Mellon Racing *Pittsburgh, PA*

Driverless Car Engineer *Aug 2020 to Aug 2022*

- Developed localization and path planning technologies for an autonomous racing car competing in Formula Student Driverless Championship
- Leveraging computer vision and robotics tools in **Python** and **ROS** to **write Rapidly-Exploring-Random-Tree algorithm** for vehicle path planning

Projects

Lane and Yaw Rate Detection (Code Here)

- Building computer vision model using **OpenCV** and **Python** to perform lane detection and yaw rate reporting
- Using Hough transforms for line identification, and other search techniques to find curvature in the road
- Leveraging feature matching to identify direction of movement in relation to car heading to determine yaw

Battlecode 2021, 2022, 2023 (Code Here)

- Developed an AI player in **Java** using unrolled pathfinding and distributed algorithms to strategically manage a robot army to defeat enemy teams
- Implemented custom map/list libraries, communications, and bit-packing methods to optimize bytecode usage
- Qualified for finals tournament; finished top 7 out of 250+ teams internationally

Tartanhacks 2021: Spot Your Mood! (Code Here)

- Created a Spotify extension using **Flask** that allows users to see the mood of their listening history and playlists
- Used Spotify, Google NLP, and Genius APIs to create a unique mood metric, combining lyric analysis with song metadata
- Developed feature for users to create an auto-generated playlist based on a specific mood they're feeling

CS and Game Theory Research, Northwestern University

- Developed simulations in **Python** and **MATLAB** to determine optimal pricing strategies for wireless service providers
- Published "Duopoly Competition in Advertising-Sponsored Wi-Fi Provision" at W.I.T.S. Conference