Rishiraj Ghosh

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Programming Languages: Java, Go, Python, C, SQL, JavaScript, Ruby, Rust, OCaml, HTML, CSS
Technologies: Kafka, Flink, Spark, React, Docker, Tensorflow, Keras, Pandas, Sklearn, Postman, Git, NodeJS, Linux

EDUCATION

University of Maryland, College Park　　　　　　　　　　　　　　　　　Expected: **May 2024**
B.S. Computer Science, Business Minor

- **Courses:** Advanced Data Structures, Intro to Machine Learning, Database Design, Algorithms, Organization of Programming Languages, Intro to Data Science, Computer Systems, Discrete Structures, Object-Oriented Programming II, Probability & Statistics, Linear Algebra, Calculus II
- **In Progress:** Algorithms for Data Science, Computer Systems Architecture, Computer & Network Security

WORK EXPERIENCE

Uber | San Francisco, California　　　　　　　　　　　　　　　　　　　May 2023 - Aug. 2023
Software Engineer Intern

- Earner Insights & Personalization - Developed a **backend signal Flink Job** on the **Driver App** that sends a notification to **Early Lifecycle drivers** after 5 minutes of **not receiving a ride** dispatch
- Processes **7k Kafka messages & gRPC calls per second** to guide ELC drivers to **Predicted High Earnings** areas
- Worked on solutions for **thousands** of the **5.5 million drivers** often not receiving a trip offer for hours in busy areas
- Utilized Java, Apache Flink, Kafka, gRPC, SQL

Centene | Charlotte, North Carolina　　　　　　　　　　　　　　　　　May 2022 - Aug. 2022
Software Engineer Intern

- Backend **Golang** developer at a **Fortune 25** healthcare company
- Developed a **watchdog service API** for the TruCare Health team's rules engine, which handles CRUD functionality for healthcare authorizations
- Created a **multithreaded timer** system using **Goroutines** to efficiently collect and analyze diagnostic data from other Centene APIs via **REST** calls. Integrated my project with a frontend **Angular & Typescript UI**

Capital One - FIRE | College Park, Maryland　　　　　　　　　　　　　Aug. 2021 - Dec. 2022
Machine Learning Research Assistant

- Researched with Python using **Tensorflow & Keras** to train and test predictive models with Dr. Raymond Tu
- Developed a Music Recommendation System: implemented **data preprocessing, CNN, Triplet Loss Model & K-nearest neighbors** while training on **10,000** Spotify playlists
- Presented research project to **200+ undergraduate students** to increase interest in FIRE and machine learning
- Specialized in research with **Deep Q-Network's & reinforcement learning** to optimize video game AI performance

VEX Robotics Team 1350 | Folsom, California　　　　　　　　　　　　　Apr. 2017 - Dec. 2020
Team Captain & Tech Lead

- Led the development of C programs & mechanical aluminum assemblies, grew the team from 2 to 10 members
- **World Championship** Innovate Award 2019, California State Design Award 2019, **20+ awards internationally**

PROJECTS

Music Recommendation System　　　　　　　　　　　　　　　　　　　Aug. 2022 - Dec. 2022
https://fire-song-recommendation.vercel.app

- Developed a ML application to recommend songs that most closely match users' interests. Used Python and Tensorflow: implemented data preprocessing, CNN, Triplet Loss Model, and K-nearest neighbors

Portfolio Website　　　　　　　　　　　　　　　　　　　　　　　　Dec. 2022 - Jan. 2023
https://rishirajghosh.github.io

- Created a personal portfolio website, utilizing **React, HTML & CSS**. Hosted on **Github Pages**

MNIST Tutorial Project　　　　　　　　　　　　　　　　　　　　　Jan. 2021 - Mar. 2021
https://mnisttutorial.wl.r.appspot.com

- Developed a machine learning tutorial with **Angular, Java & Javascript**. Hosted on **Google Cloud Platform**