SAMARTH JAIN

samarth3@illinois.edu www.samarthjain.me (217) 419-7405 jsamarth jsamarth

EDUCATION

University of Illinois at Urbana-Champaign (UIUC) Aug. 2016 - Dec. 2020
Bachelor of Science, Computer Engineering
GPA: 3.2 /4.0
Relevant Coursework: Distributed Systems, Computer Security, Algorithms, x86 Architecture, Data Structures

École Polytechnique Fédérale de Lausanne (EPFL), Switzerland (Exchange) Feb. 2019 - June 2019
Relevant Coursework: Database Systems, Computer Vision, Artificial Neural Networks, Virtual Reality

EXPERIENCE

Amazon, Berlin, Germany Aug. 2019 - Dec. 2019
Software Development Intern
- Improved the ranking algorithm at Amazon Gifting, a curated catalog of products designed to inspire gift ideas, by using Java and Spring
- Delivered code in a microservices-based model that dealt with data of millions of products, using the big data library Apache Spark and ElasticSearch, to rank them in their correct categories in AWS S3
- Aided in the ranking of products by implementing Thompson Sampling, an exploration/exploitation probability model, which brought less-popular products up in the rank
- Collaborated with a team of 9 on ideas for new ways of optimizing product ranking and curating
- Contributed to Correction of Errors during the peak, Q4, Thanksgiving period
- Led A/B-testing of the experiment which produced 3% increase in sales within 1 week after the end of the project, in key markets such as UK, Germany and France

ECE @ University of Illinois, Dr. Olgica Milenkovic, Champaign, IL Mar. 2018 - May 2019
Bioinformatics Research Assistant
- Qualitatively analyzed and implemented a Neural Net on human genomic data of more than 15,000 patients to find patterns between bacterial taxons from those DNA sequences and human habits and diseases
- Performed data-wrangling using multiple techniques such as PCA, on Pandas in Python
- Generated a Neural Net out of the cleaned data on Keras in Python and experimented with different data splits for cross-validation

PROJECTS

Simple Blockchain with Nakamoto consensus Mar. 2020 - Apr. 2020
- Implemented a basic, fault-tolerant Cryptocurrency System with ideas taken from Bitcoin such as the gossip protocol
- Designed Mining and Proof-of-Work multi-threaded algorithms using Python and Sockets

Traffic Simulation for Autonomous Vehicles Dec. 2018 - Jan. 2019
- Optimized the algorithm to allow a greater average speed of an autonomous vehicle through a traffic situation on the road, in the MIT Reinforcement-Learning challenge
- Pruned the hyperparameters to increase the average speed from 52 mph to greater than 70 mph, using the given Deep Reinforcement Learning code

SKILLS

CODING LANGUAGES: Java, C/C++, Python, SQL, Clojure, Javascript, PHP, HTML/CSS, C#, Scala, Verilog/System Verilog, Kotlin
FRAMEWORKS: MATLAB, AngularJS, ReactJS, MeteorJS, MongoDB, Unity, NodeJS, Spring, Docker, MySQL
LIBRARIES: CUDA (C), Tensorflow (Python), Pandas (Python), Scikit-learn (Python), Apache Spark (Scala, Java), AWS, Selenium / Beautiful Soup
OTHER SPECIALITIES: Git/Github, x86 Dev, Data Structures, Web Scraping, Linux Kernel, iOS Dev, Databases, FPGA, Information Security, ElasticSearch, WebSockets, WebRTC, REST API, Maven, Cassandra

CERTIFICATIONS

AWS Certified Cloud Practitioner
Awarded by Amazon Web Services Aug. 2020 - Aug. 2023
Skills: Knowledge of Cloud Concepts, AWS services and best-practices, AWS Security