Varun Kulkarni

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US Citizen

Education

GEORGIA INSTITUTE OF TECHNOLOGY, College of Computing **Atlanta, GA**
Bachelor of Science in Computer Science May 2022
GPA: 3.53 Faculty Honors
Coursework: Automata & Complexity, Machine Learning (Python), Networking (Python & C), Information Visualization, Algorithms, Databases (SQL), Intro to AI (Python), Data Structures, Discrete Mathematics, Linear Algebra, Statistics

Skills

Programming Languages – Python, Java, Javascript (ES6), C, ReactJS, Node.js, HTML/CSS, Shell Script, Swift, Spring Boot
Cloud & Distributed Systems – Amazon Web Services (AWS), Kafka, Confluent, Linux, Docker, Kubernetes
Data Science – D3.js, MySQL, Elasticsearch, Logstash, Kibana, Grafana, MongoDB, Machine Learning, Neural Networks, AI
CI/CD – Git, Ansible, Jenkins, Bitbucket, JIRA, Confluence, DevOps, JMeter
OS: Ubuntu, Unix, Openshift Kubernetes, iOS, Windows
Certifications – AWS Solutions Architect (Associate, Expires August 2022)

Experience

NCR Corporation **Atlanta, GA**
Software Engineering Intern, Innovation Lab *May 2021 – August 2021*
- Combined React Native, NestJS, and Google Cloud SQL to make a proof of concept for a full-stack retail gamification mobile application
- Showed how user social activity such as recipe recommendations and shopping activity can yield to loyalty program rewards with grocery stores and retailers
- Presented mock application, business case, and Figma user stories to business leaders in a company-wide intern expo

Openet Telecom **Reston, VA**
Software Engineering Intern, Rotation 2 *June 2020 – February 2021*
- Reduced end-to-end processing of cellular records for a tier 1 operator by **40%** using a Kafka mediation solution
- Aggregated & correlated event-data records with customized Kafka connectors and Java-based microservices
- Enriched data streams with **per-customer data** using Javascript to provide tailored output to billing systems and CRM
- Deployed solution in Openshift Kubernetes environment for the client using Jenkins and CI/CD testing pipelines

Openet Telecom **Reston, VA**
Software Engineering Intern, Rotation 1 *May 2019 – August 2019*
- Configured and customized end-to-end monitoring solution for network traffic and availability for a client with **1.2 million active subscribers** using **Elasticsearch, Logstash, and Kibana/Grafana** dashboards
- Reduced the time to detect network outages by 25% using visualizations for usage records, key performance indicators, and alarm data
- Ensured efficiency and integrity of real-time 3G and 4G network data streams by conducting multi-day performance testing using **JMeter** at up to 2000 concurrent transactions per second

Research & Projects

HAM10000: Skin Cancer Classification & Prediction **Atlanta, GA**
Machine Learning Course Project, Fall 2021 *August 2021 – December 2021*
- Utilized Convolutional Neural Networks to classify 6 **skin lesions** based on **microscope images with >70%** accuracy

- Explored the network architecture and performance of various state-of-the art CNN models on skin cancer data
- Compared image-based lesion classification with classification using patient data via a decision tree model

EcoCAR Mobility Challenge   **Atlanta, GA**
Connected & Automated Vehicles Subteam Member   *August 2019 – December 2020*
- Transformed a standard Chevrolet Blazer into a hybrid-electric, semi-autonomous vehicle
- Applied **sensor fusion algorithms** in Matlab and Simulink to simulate vehicle internal and external sensors, radars, and cameras. Used the data to reliably **detect vehicles in the blind spot** and effectively alert the driver

Student Center Programs Council, Georgia Tech   **Atlanta, GA**
Back-end Developer   *March 2019 – May 2019*
- Helped implement part of the Council's NodeJS and MongoDB backend, handling tasks like information, scheduling, and sign-in for on-campus events.
- Assisted in integrating the backend with the front-end using ReactJS

Twogle: A Semantic Search Engine   **Atlanta, GA**
Hackathon Project, Developer   *October 2018*
- Utilized Google Cloud Platform, Azure ML APIs, and PHP to create a search engine which uses cookies to keep track of **users preferred web sources** and propagates results from those places to the front of search
- Supported front-end development using **Bootstrap** and responsive web design techniques

SeeCodeRun: Online Javascript Playground with Developer-Centered Features   **Fairfax, VA**
Full Stack Contributor   *June 2017 – August 2017*
- Aided in the exploration of features for an online live development environment for HTML, CSS, and Javascript by analyzing scientific papers related to the common setbacks of Javascript developers
- Developed and implemented a plugin for the development environment which **color codes** lines of the user's Javascript code **to the exact text, images, or entire sections** affected by that particular line
- Presented at a regional science fair and won the **IEEE Northern Virginia Chapter Award** for computer science projects