Abhishek Venkat

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Detail-oriented software engineer with a passion for applying innovative solutions to real-world problems. Well versed in modern software technologies and practices including Continuous Integration/Continuous Deployment (CI/CD) and microservices architecture. Adept at combining and applying multiple computer science disciplines including computer vision, data science, machine learning, compilers, cybersecurity, and full-stack web development.

Education

- **University of Maryland, College Park** — College Park, MD
  Bachelor of Science in Computer Science; Honor's College GPA: 3.85 — *Aug 2018 – Dec 2021*

Experience

- **Kitware**
  Research and Development Intern — *May 2021 - Aug 2021*
  - **Software Development**: Developed full-stack application for medical imaging quality assurance using Vue, PostgreSQL, and Django. Re-designed and developed data ingestion and permissions model, improving page loading speeds by 80%. Developed novel, distributed task management system for domain specific quality control tasks.
  - **DevOps**: Provisioned and maintained resources on Amazon Web Services (AWS) such as EC2, S3, and more using Terraform and Ansible. Integrated GitHub Actions for CI/CD.
- **Naya Studio**
  Full Stack Developer — *Aug 2020 - Nov 2020*
  - **Software Development**: Designed, developed, and tested several MERN-stack (MongoDB, Express, React, Node.js) applications. Developed systems for authentication, notifications, analytics, and more.
  - **DevOps**: Utilized Google Cloud Platform for CI/CD of code from GitHub. Organized and managed network of microservices.
- **Johns Hopkins University Applied Physics Laboratory**
  Software/Cyber Intern — *May 2020 - Aug 2020*
  - **Network Traffic Analysis**: Developed network traffic decoder and visualizer: Read, parsed, and displayed UDP packet data via interactive web app in Go. Generated alerts and provided error handling for malformed and unauthorized packets.
  - **Network Security**: Improved algorithms and data structures for IP white-listing application: Greatly increased efficiency of procedure and provided different modes for varying degrees of security.
- **Johns Hopkins Department of Cell Biology**
  Technical Intern — *Jun 2015 - Aug 2017*
  - **Computer Vision**: Utilized Otsu Binarization, Canny Edge Detection, and other image processing techniques to identify and analyze key characteristics of Hutchinson-Gilford Progeria Syndrome using OpenCV and Python.
  - **Machine Learning**: Classified images to identify presence of disease in microscopy samples; Utilized a convolutional neural network using Keras and Python.

Projects

- **Quantopian**: Developed Python scripts using open source quantitative finance software by Quantopian to trade financial securities based on sentiment analysis derived from social media platforms; Back-tested on historical data.
- **NewsFeed**: Fully functional, auto-maintained news platform designed to algorithmically track and display the latest and most popular news articles; Hosted on Heroku and maintained with the Firebase and the New York Times API. Website coordinates 50+ API requests ranging across text, image, and other modes of data.

Software Skills

- **Languages**: Java, Python, Ruby, C, Node.js, SQL, NoSQL, HTML, CSS, Javascript, OCaml, MATLAB, Go
- **Technologies**: Angular, React (Flux/Redux), Vue (Vuex), Django, Rails, Ionic, Express, Git, MongoDB, Sqlite, PostgreSQL, OpenCV, GraphQL, AWS, GCP, Ansible, Terraform