Anup Sanjeev Patel

anup2230@gmail.com | (847) 409 6211 | Chicago, IL | linkedin.com/in/anup-patel2230 | github.com/anup2230 | US Citizen

Education

University of Illinois at Urbana-Champaign *May 2022*

Applied Mathematics Major with Computer Science Minor *3.7/4.0*

Skills

Python (Pytorch, SymPy, Pandas, Keras, TensorFlow, SciPy, PyTest, Jupyter Notebooks), Front End Development, Java, Javascript, React.js, React Native, Node.js, Express.js, Angular.js, Next.js, Backend Development, C/C++, SQL, NOSQL, PostgreSQL, Cloud Computing (Amazon AWS, Microsoft Azure, Google Cloud GCP), Jfrog, Artifactory, Docker, Kubernetes/K8s, Prometheus, Git, Jenkins, Cypress, Selenium, Ansible, CFEngine, Puppet, Terraform, Unix/Linux, Windows, Jira

Experiences

TuSimple *August 2022 – August 2023*

Software Engineer - DevOps *Tucson, AZ*

- Developer for vehicle infrastructure, system operations, and autonomous deployment teams, responsible for high utilization of resources through the maintenance of the robotics operating system, CI/CD pipelines, and docker container orchestration software.
- Implemented industry best practices and tools to maintain CI/CD pipelines for multiple projects, implementing continuous integration, automated testing, and deployment strategies to optimize project workflows and ensure production quality.
- Set up and managed private cloud infrastructures using AWS which include VPC, EC2, S3, Cloud Front, EFS, RDS, Direct Connect, Route53, Cloud Watch, Cloud Trail, Cloud Formation and IAM.
- Ensured minimal downtime and successful implementation for fleet software deployments from testing to rollout, utilizing Docker and Docker Registry to store and distribute docker images.
- Reduced the time to validate an autonomous truck by over 90% by developing the vehicle validation pipeline, a continuous integration pipeline used to validate newly upfitted trucks were ready for production, utilizing Jenkins, Cypress, JS, and Python.
- Improved asset observability and configuration management across the organization by developing an internal infrastructure management web application used to track the vehicles for hardware/software configuration and schedule updates for the fleet.
- Improved maintainability and scalability of infrastructure management of our fleet by developing IaaS templates, provisioning on Linux machines, and deploying features using Ansible and Ansible Tower.
- Increased the observability of current issues by leading weekly meetings to review root cause analysis and triage complex network, system issues reported by the autonomous vehicle help desk (AVHD).
- Collaborated with test engineers and QA teams to provide in-depth documentation, investigate and create bug reports, provide relevant data to remote teams, and coordinate hotfixes for current issues.
- Improved workflow efficiency by developing Python and Bash scripts to create a toolset for common and current issues faced by AVHD.
- Communicated service level objectives with 50+ internal stakeholders, directors, PMs, developers, QAs, electrical engineers, and other technologists across the company.

Codakid *April 2021 – April 2022*

Programming Instructor *Scottsdale, AZ*

- Mentored and led over 30 young adults(ages 9-16) on real projects to develop their interest in programming.
- Adapted teaching methods based on each student to drive interest, effectively transfer knowledge, and motivate them through the courses.
- Developed supplemental courses introducing data structures and algorithmic programming questions for advanced students to learn OOP.
- Led students through one-on-one game development courses utilizing Python, Java, Lua through a remote environment during the height of COVID.
- Courses progressed through learning with Scratch by MIT, PyGame development, Lua coding in Roblox Studio, creating mods with Java in Minecraft and 3D game development with Unreal Engine.

Projects

Trauma Chatbot App | React Native, Next.js, Node.js, Google Cloud Platform

- Built a full-scale application in React Native for users to have their own chatbot to discuss issues related to physical and emotional trauma.
- Created an API server to handle responses to the Google Gemini language model.
- Utilized GCP offerings including Firebase and Firestore to store sensitive user information and user credentials

Personal Voice Generator | Node, JS, HTML, CSS

- Utilized the Replicate API along with the ‘tortoise-tts’ model to clone a user’s voice and generate personal speech from text.

Hospital Bed Availability | Java, Python, SQL, GCP

- Created an application using Android Studio, a GCP hosted MYSQL database, and Python, to increase efficiency of hospital resource management.

Ticket Finder Bot | Python, Selenium, Azure VM

- Created a Discord Bot hosted on an Azure virtual machine that searched for tickets under a custom criteria every few seconds, and once a desired ticket was found sends the reserved ticket URL to a Discord server.

Crypto and Stock Price Prediction| Python, Pytorch

- Developed a Python script to compile all time historical data for 500 stocks and cryptocurrencies to store into PostgreSQL database.
- Designed and Implemented a convolutional neural network using images of a stock’s price graph to classify stock as either “buy” or “sell”.

Certificates

AWS Certified Solutions Architect, LFCS, Associate in Python Programming (Python Institute)