Aditya Deepak Bhat

+1 (602) 814-4386 | Tempe, AZ, US
aditya.deepak.bhat@gmail.com | linkedin.com/in/aditya-deepak-bhat | github.com/aditya-bhat | **Portfolio**: aditya-bhat.github.io

Experience

Software Engineer Intern | Tesla (Fremont, CA) Aug 2023 - Dec 2023

- Architected the end-to-end solution for a quote analyzer using Serverless (**AWS Lambda**) and Machine Learning (**TensorFlow**), enabling sourcing managers to get obtain a comprehensive analysis of quotes from multiple suppliers (**PostgreSQL**) in *5 seconds*.
- Optimized backend sourcing analytics APIs (*AWS Lambda, API Gateway, Terraform*) utilizing data prefetching (**PostgreSQL**) and multithreading (**Python, NumPy, Pandas**) to achieve a significant reduction in response time by ≈83% to 5 seconds.

Software Development Engineer Intern | Amazon Web Services (Seattle, WA) May 2023 - Aug 2023

- Designed and developed router improvements for the Message Gateway Service API in **Java**, optimizing cell-based routing between the control plane and data plane for over **10 million** SSM Agents in AWS Systems Manager - Session Manager.

Full Stack Web Engineer Assistant | EdPlus at Arizona State University (Scottsdale, AZ) May 2022 - May 2023

- Designed a POC for a transcript analyser using OCR (**Amazon Textract**) and natural language processing (**Python)** to automate and streamline transcript parsing/verification.
- Implemented a CI/CD pipeline for deployment on **AWS Amplify** for end-to-end testing based on **Vue.js**, and **Cypress.io** for the ASU Online website which supports 82,000+ students.

Software Engineer | Hewlett Packard Enterprise (Bangalore, India) Jul 2019 - Dec 2021

- Led the development of a web application leveraging **MongoDB, React.js**, and **Node.js** that reduced the manual effort of the triage team by 50%, saving each engineer 2 hours per day on triage and reporting.
- Conceptualized and implemented a health monitor for Aruba AOS-CX builds using **Python, NumPy, React.js**, and **MySQL** resulting in a 25% improvement in build stability via automated baselining and alerts based on feature performance metrics.
- Developed a web-based reservation tool for 8000+ networking devices with network auto-discovery using **Python** and **JavaScript** frameworks (**Node.js and React.js**), achieving a 20% improvement in resource utilization.

Research and Development Intern | Hewlett Packard Enterprise (Bangalore, India) Jan 2019 - Jul 2019

- Improved the ARP scale characterization reporting time by 90% and provided a dashboard to visualize ARP learning rates through automated data analysis with **Python (NumPy, Pandas), REST APIs**, and **MongoDB**.
- Involved in the development of a **Flask** based web tool to translate Aruba PVOS config to its AOS-CX equivalent.
- Implemented libraries in **Python** for automation of switching protocols such as ARP, OSPF, etc., and traffic generation APIs for IXIA which increased flexibility to perform stressed network testing.

Research Intern | Center for Cloud Computing and Big Data at PES University (Bangalore, India) Sep 2017 - Jan 2019

- Trained and deployed machine learning models with **TensorFlow, AWS (EC2, S3)** to rate word pronunciation, achieving an F1-Score of ≈ 95%. Link
- Awarded the **Best Paper/POC Award** for POC titled **"Kannada Kali - Learning Languages Made Easy"** among 100+ teams at the 2018 IEEE International Conference on Cloud Computing for Emerging Markets.

Machine Learning Intern | Pattern Effects Labs (Bangalore, India) May 2018 - Aug 2018

- Achieved a 50% reduction in trading costs and a micro-average F1-Score of ≈ 65% by conducting experiments on tree and ensemble models and performing feature engineering using technical indicators on the NIFTY Stock Index.
- Improved the profitability of models by 20% by optimizing train/inference window size and hyper-parameters through training, hyper-parameter tuning, and back-testing on over 10 years of historical data using **scikit-learn, Keras**, and **TensorFlow**.

Technical Skills

Programming: Python, JavaScript, Java, C/C++
Full Stack: React.js, Node.js, Express.js, Flask, MongoDB, PostgreSQL, MySQL, Cypress, Jest, GraphQL (Hasura)
DS/ML: NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, Keras, TensorFlow, spaCy, OpenCV, D3.js
Other: Git, AWS (EC2, S3, SQS, Lambda, API Gateway, DynamoDB, Systems Manager), Terraform, Docker, pytest

Projects

Real-Time Face Recognition on edge devices (Raspberry Pi) | Cloud Computing | ASU Link

- Designed a distributed application that utilizes AWS services (**API Gateway, Lambda, S3, DynamoDB**) to perform real-time face recognition using a containerized Inception Resnet V1 model on videos recorded by IoT edge devices with a latency of 0.5 seconds.

LegoNet | Final Year Undergrad Dissertation | PES University Link

- Proposed an NLP system using **TensorFlow**, to classify and summarize Indian legal judgments using sentence embedding, Capsule Networks and Unsupervised Text Summarization. Achieved a ROUGE-l score of ≈0.65 and an F1-score of ≈0.7.

Education

Master of Science | Computer Science | GPA: 4.00/4.00 Dec 2023
Arizona State University, Arizona, US | Relevant Courses: Cloud Computing, Semantic Web Mining, Data Processing at Scale, Data Intensive Systems for Machine Learning, Statistical Machine Learning, Foundations of Algorithms.

Bachelor of Technology | Computer Science and Engineering | GPA: 8.8/10 Aug 2019
PES University, Bangalore, India | Specialization in Data Science.