Aman Pathan

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# Education

## Arizona State University *USA*

MaSTEr Of SCiENCE iN COMPUTEr SCiENCE, GPA: 4.0/4.0 *January 2021 ‑ December 2022*∗

## Ahmedabad University *India*

BaCHELOr Of TECHNOLOGY iN INfOrMaTiON aND COMMUNiCaTiON TECHNOLOGY, GPA: 3.33/4.33 *July 2014 ‑ May 2018*

**Skills**

**Languages** Python, Java, C, C++, HTML, CSS, JavaScript, SQL

**Databases** MySQL, DynamoDB, PostgreSQL

**Frameworks** Django, Flask, Node.js, TensorFlow, PyTorch, Keras, OpenCV, Pandas, NumPy, Bootstrap

**Tools** Git, Jira, AWS, GCP, Docker, Heroku, Jupyter Notebook

# Experience

**Arizona State University** *January 2021 ‑ Present*

SOfTWarE ENGiNEEr

* Managed large‑scale deployment of JupyterHub with Nbgrader and webwork software, facilitating approx 5500 students.
* Handled linux server administration, apache configuration, and administered server‑side web applications for the statistics department.
* Managed backup/recovery, configuration management, and maintenance for MySQL and SQLite databases; automated tasks like user account creation, database management, and system maintenance using Shell and automation scripts, reducing manual work by 200%.

**Augmenify Infotech Pvt. Ltd.** *September 2020 ‑ November 2020*

BaCKEND DEvELOPEr

* Documented and coded server‑less web application for the hotel industry and designed REST API using Flask‑based JWT authentication.
* Redeveloped an existing system to support customer account management, scheduling, and time tracking; enabled API calls by making use of Amazon API Gateway, AWS Lambda, and DynamoDB, lowering company’s cost by 20%.

**Epitome Corporation Pvt. Ltd.** *July 2019 ‑ December 2019*

SOfTWarE DEvELOPEr

* Tested, designed, and developed backend APIs of WebRTC based multi‑party video conferencing web application and delivered the project 15 days ahead of schedule by efficiently designing the flow of the project.
* Utilized Django technologies including templates, ORM and forms to communicate with databases.

**Meditab Software Pvt. Ltd.** *May 2018 ‑ June 2019*

PrOGraMMEr ANaLYST

* Optimized image processing algorithm of pill detection by creating customized MASK‑RCNN algorithm, increasing accuracy by 15%.
* Trained classification algorithm along with triplet loss to learn the embedding of pills, minimizing the hassle of collecting data of new pills.
* Devised a pipeline of the project to incorporate it into the product of the company. Implemented Restful APIs in Django that helped Quality Analyst team to increase reporting speed by 46%.
* Built a web app to onboard data from the company’s product using Flask, Postgres, and AWS S3, enabling interactive charts in real‑time.
* Mentored 2 interns to optimize the pill detection algorithm and to include the multiprocessing pipeline, increasing overall speed by 75%. **Indian Space Research Organization (ISRO)** *January 2018 ‑ May 2018* RESEarCH INTErN
* Implemented noise reduction algorithm on the satellite image and prepared architecture for detecting objects in high‑resolution satellite images,

achieving 80% accuracy.

* Increased accessibility of satellite image data by redesigning database and application for showcasing graphical data.

# Project

**Twitter Analysis** *February 2021 ‑ April 2021*

TECH STaCK: PYTHON, DJaNGO, HTML, CSS, BOOTSTraP, GCP(PUB/SUB, DaTafLOW, DaTa STUDiO, GAE, BiGQUErY)

* Created a web‑based elastic application to provide the user with a detailed analysis of the sentiment of users on top 10 trending movies and songs utilizing Google Cloud Platform services.
* Coded Pub/Sub routine to fetch 1000 tweets at a time from Twitter; stored data in BigQuery for efficiently displaying data in DataStudio.
* Used Dataflow for resource autoscaling and work rebalancing, decreasing overall response time by 50%;
* Assessed the scalability of web application by generating 10000 user requests with the help of Apache Beam.

**Image Recognition as a Service** *January 2021 ‑ March 2021*

TECH STaCK: Java, NODEJS, PYTHON, HTML, CSS, JavaSCriPT, AWS(S3, EC2, SQS)

* Built an elastic web application that automatically scales in and scales out 20 EC2 instances based on the traffic of current users; created custom AMIs to deploy image recognition app on EC2 instance; used SQS to handle request and response.
* Deployed image recognition system on AWS and successfully evaluated the application by generating 1500 requests.

**Music Streaming Website** *June 2020 ‑ July 2020*

TECH STaCK: PYTHON, DJaNGO, HTML, CSS, BOOTSTraP, AWS(S3), HErOKU

* Developed music player comprising of features like login/register, play songs, view detailed info of song, create customized playlist, view recently played songs, and applying search filters.

# Achievements

2021 **Scholarship**, Received 100% tuition fee waiver at Arizona State Univeristy. *USA*

2016 **Hackathon**, Stood 51st countrywide in IEEE XTREME Coding Competition. *India*