NKUSH JAIN

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EDUCATION

New York University, NY, USA

Sep 2019 - Present

M.S. Computer Science • GPA: 3.8 • Coursework: Algorithms, Big Data, Cloud Computing (AWS), Deep Learning, Machine Learning & NLP

Dr. APJ Abdul Kalam Technical University, Lucknow, IND

Aug 2013 - Jun 2017

B.Tech. Computer Science • Aggregate: 74.5% • Coursework: Data Structures, DBMS, Distributed Systems, Networks, OS, Software Engg & Testing

EXPERIENCE

Product Lead (Part-Time) • Vyorius, Delhi, IND [LINK] [LIVE] Node.is, React, Amazon Web Services (EC2, S3, DynamoDB)

Mar 2020 - Present

- Deployed Vyorius Control Center application (a platform for operating and managing unmanned robots) on AWS EC2
- Converting the monolith app to microservices architecture using DynamoDB, Cognito, SNS, SQS, Code Pipeline etc.

Graduate Research Assistant • NYU Centre for Data Science, NY [LINK] Python (IBM AIF360, LIME, SHAP)

Jan 2020 - June 2020

Developed an open-source Python library called FairPrep to design and evaluate machine learning models for social fairness and enable the users to model human demographics data without any bias (based on race, gender, orientation etc.)

System Engineer • Infosys Limited, Mysore, IND

Oct 2017 - May 2019

- Infosys AI-Led Quality Assurance Platform [LINK] Node.js, Angular, MongoDB, D3.JS, Python (NumPy, Pandas, NLTK, SciKit-Learn, SpaCy)
 - Deployed ML solutions to full-stack application (MEAN) and designed D3.JS visualizations for SQA processes such as testsuite optimization, defect analysis, and requirement-testcase traceability
 - Built the NLP & ML model for the Test Suite Optimizer to identify up to 30% redundancies and similarities in regression tests
 - Platform being used by leading Infosys projects in Financial Services and Energy domain
- Infosys DevOps Testing Platform [LINK] Node.is, Express.is, Elasticsearch, Kibana, SQL, Python (NumPy, Pandas, SciKit-Learn)
 - Built a DevOps software quality dashboard to leverage the data from test cycles and report project health in a simplified way
 - Engineered the data pipelines to redirect the test logs from data source to Elasticsearch and SQL via Express RESTful APIs
 - Blended data with ML regression models and Kibana for analysis and visualization

PROJECTS

SecuroDrive [LINK] AWS (Lambda, API Gateway, SageMaker, Cognito, Rekognition, Kinesis Video Stream, VPC), Java, JQuery, Elasticsearch Sep 2020 – Dec 2020

- Built a driving assistant to avoid road accidents by applying AI on live video stream and issuing alerts when the driver is drowsy
- Developed serverless API backend with Lambda and Java, implemented user auth with Cognito and Rekognition, trained and deployed the AI model with SageMaker, and produced real-time data analytics with Elasticsearch and Kibana

Multi-hop Question & Answering [LINK] Flask, Python (PyTorch, Transformers, NumPy, Pandas, SciKit-Learn)

Sep 2020 - Dec 2020

- Implemented a question and answering model for multi-hop questions that requires logical inference or aggregation of information from various parts of the information text (like referring multiple wikis to answer a question)
- Trained a transformer-based Longformer model as it is better suited for long-text inputs (unlike BERT) and deployed on Flask

Al Email Search Engine (Ascend) [LINK] FastAPI, React, MongoDB, Python (Tensorflow, Transformers, NLTK, SciKit-Learn)

Jun 2020 - Aug 2020

- Developed an end-to-end natural text search engine for business teams to mine business information, documents, contacts, and meetings from the mailbox data of all the project team member (solo project inspired by COVID-19 remote work policies)
- Deployed BERT model for question and answering on FastAPI Python backend server and built the frontend with React

Big Data Profiling & Quality Analysis [LINK] Apache Spark, Hadoop, SparkSQL, MapReduce, Python (NLTK, SpaCy)

- Built a high-performance Spark pipeline to ingest 1900 New York City open big data sets in order to emulate real-world data volumes, handle data noise, and perform semantic profiling of the columns
- Classified column types like address, name, organization, vehicle, color etc. with 72.4% avg. accuracy and up to 95% precision

TECHNICAL SKILLS -

- Languages: Python, Java, C/C++, JavaScript, HTML, CSS
- Cloud Platforms: Amazon Web Services (S3, Lambda, EC2 etc.)
- Frameworks & Libraries: Node, FastAPI, Flask, React, Databases: SQL, MongoDB, Elasticsearch, DynamoDB Angular, Express, JQuery, Spark, PyTorch, TensorFlow/Keras, • Platforms: Linux, Unix, Windows Boto3, Bootstrap, D3.JS
 - Tools: Git, Docker, Jupyter, Spyder, Anaconda, Travis CI, NPM

ACCOMPLISHMENTS & VOLUNTEER EXPERIENCE

Taught underprivileged kids at 'Teach for Mysuru', an initiative by Infosys Mysore

Oct 2018 - May 2019

- Rated 'Outstanding' (top 5%) at Infosys in every annual appraisal from fiscal years 2017-19
- Earned a three-year diploma in Indian Classical Vocal Music