

Aayush Vikram Shah

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WORK EXPERIENCE

Student Researcher, Microsoft, Seattle, USA Jan '21 – Present

- Building an NLP powered web app to empower differently abled to gain 360° insight into tech company's hiring initiatives

Software Engineering Intern, TerraClear Inc, Seattle, USA Jun '20 – Dec '20

- Revamped the data processing pipeline for raw multispectral/RGB drone images to create the COCO dataset for the Convolutional Neural Networks in Linux
- Spearheaded research on image processing techniques for boundary & object detection from stitched orthomosaic images by leveraging OpenCV in Python and Gimp in Linux
- Optimized operational processes of the Computer Vision & AI team by **60%+** and reduced **18+** man-hours per week
- Designed & created a relational PostgreSQL database to preserve JSON based drone data generated from the pilot portal
- Conducted code reviews and collaborated with cross-functional stakeholders to revamp code review procedures

Data Scientist Intern, Puratech Solutions, Mumbai, India Jun '18 - Aug '18

- Refactored the consumer demographic data processing workflow and increased operational efficiencies by **12%**
- Collected and analyzed web scraped data in R to derive insights on customer behavior, informing strategies that helped increase the customer retention rate by **9%**
- Conceptualized and implemented A/B test plans to validate customer hypotheses and understand behavior patterns

PROJECTS

Data Scientist - Sales Data Warehousing and Visualization, Seattle, WA Mar '20 - Jun '20

- Built a snowflake schema using dimensional modeling & designed SSIS packages for performing ETL on **250,000** transactions
- Constructed curated views & built compelling visualizations on Tableau to deliver business strategy insights for all audiences

Data Scientist - ML Driven DNS Malware Detection System, Seattle, USA Mar '20 - Jun '20

- Developed and deployed RESTful APIs using AWS API Gateway to classify fully qualified domain names as DGA or Benign
- Processed unstructured data to generate a **15 million rows** custom dataset uploaded to an AWS S3 bucket
- Implemented XGBoost Classifier using AWS SageMaker & scaled to **1,000,000+** predictions per minute through AWS Lambda

Team Lead - Grocery Retail Sales Analysis, Seattle, USA May '20

- Analyzed store trends & created Tableau dashboards to recommend high profitability categories & items to store owners
- Predicted revenue of store for forthcoming months using FBProphet model on accrued time-series data with a 15.67 RMSE
- Awarded **2nd position** for the best machine learning model at University of Washington hackathon with **200+** participants

Software Developer - Stock Market Forecaster, Mumbai, India Aug '18 - May '19

- Implemented a real-time stock value predictor for listings on the Bombay Stock Exchange (BSE) using Python and Django
- Synthesized a model of Sentiment Analysis on Twitter and News Websites, Neural Networks and Support Vector Regression
- Tuned the model hyperparameters using K-Fold Cross Validation, and used TF-IDF & smoothing to attain **95.03%** accuracy
- Secured **2nd runner-up** position at Prakalpa, an annual state-level technical symposium held at the University of Mumbai

Machine Learning Engineer - Breaking CAPTCHA using CNN, Mumbai, India Oct '17 - Nov '17

- Evaluated the robustness of a CAPTCHA generator by stress testing using hard-to-comprehend text snippets
- Exposed security risks and system vulnerabilities by leveraging Convolutional Neural Networks for alphabet/digit recognition

EDUCATION

University of Washington Seattle, WA

Master of Science in Information Management (Specialization – Data Science) | GPA: 3.81/4 Expected: Jun '21

- Coursework:** Scaling & Applications in Data Science, Machine Learning for Biomedical & Public Health, Foundations of Data Science, Machine Learning & Econometrics, Advanced Databases, Business Intelligence Systems, Statistics
- Teaching Assistantships:** Digital Marketing Analytics, Data Science Fundamentals, Machine Learning Methods and AI, Introduction to Programming for Data Science, Foundations of Python Programming, Python Programming Essentials

University of Mumbai Mumbai, India

Bachelor of Technology in Computer Engineering | GPA: 3.7/4 Aug '15 - Jun '19

- Coursework:** Data Structures, Big Data Analytics, Artificial Intelligence, Machine Learning, Image Processing, Data Warehousing and Mining, Neural Networks and Fuzzy Logic, Business Intelligence, Applied Mathematics

SKILLS

Programming Languages: Python, R, Java

Tools & Tech Stack: AWS, SQL, MongoDB, Tableau, PyTorch, PowerBI, Hadoop, MS-Excel, Putty, Jira, Git & Version Control