AYUSH BHANDARI

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EDUCATION

Dec 2020 **Master of Science in Data Science** *Northeastern University, Boston, MA*
Teaching Assistant: Data Mining Techniques(CS6220)

Jun 2018 **Bachelor of Engineering in Computer Science** *Birla Institute of Technology, India*

WORK EXPERIENCE

Apr 2022-Present **Data Scientist II** Afiniti, Washington, DC
AT&T - Tech Care [Tools: R, Python, SQL, Excel, Classification, XGBoost, Tensorflow]
- Collaborated with cross-functional teams ensuring launch of a line of business generating 175K USD revenue per month
- Created feature engineering pipeline extracting and transforming critical features improving model performance by 12%
- Designed a metric to predict customer churn with 85% accuracy reducing the lag from 7 days to 2 days
- Implemented a Neural Network to generate agent estimations thereby increasing their average handle time by 20%
- Setup data sanity checks to ensure data integrity for modeling

Apr 2021-Mar 2022 **Data Scientist I** Afiniti, Washington, DC
AT&T - MOBCLG [Tools: R, Python, SQL, Excel, HTML, RMarkdown, Classification, XGBoost]
- Analyzed call center data to extract actionable insights thereby reducing average speed of answer by 18%
- Implemented scripts to monitor the production models by creating sensors for detecting anomalies
- Deployed Bayesian statistical prediction models for agent caller pairing delivering over 15M USD revenue monthly
- Optimized diagnostic report for 2 metrics to identify underlying issues in performance

Jan 2020-Aug 2020 **ML Engineer Intern** Examity Inc., Newton, MA
V5 Platform [Tools: Angular, .NET, SQL, Python, TensorflowJS, Microsoft Cognitive Services API]
- Developed Face Verification feature with 70% perfect matching, enabling seamless test-taker authentication
- Optimized automated proctoring code improving flagging accuracy by 20% as well as speed by 15%
- Enhanced the existing Auto Proctoring System to make it robust and cater to the 68% increase in the exams
- Wrote stored procedures to enable work force team to limit exams per hour based on availability of proctors
- Migrated exam videos from Rackspace to AWS S3 using EC2 instance in 40% lesser time than manually
- Resolved various bugs as well as added minute features improving user experience

Apr 2018-Jul 2018 **Applied Software Intern** Genus Power Infrastructure Ltd., India
6-Channel DC Wave Data Logger [Tools: C#, Eclipse, Embedded C, Excel, Python]
- Led a team of 5 for creating a protocol for logging data from TI MSP430 6779 for meter data analysis in assembly line
- Scripted a protocols for transfer of data from microntroller's EEPROM to pc via UART
- Generated reports illustrating electric meter usage data trends leading to 30% improvement in human resource utilization

ACADEMIC PROJECTS

Sep 2020-Dec 2020 Image De-Identification Using Deep Learning [Tools: Python, PyTorch, AWS, Flask, HTML, AWS EC2]
- Detected faces and estimated pose using Tencent DSFD and Mask R-CNN respectively
- Built GAN using U-NET architecture for anonymizing images
- Achieved similarity of less than 0.3 on matching original and anonymized image
- Deployed the model to a web UI using Flask and AWS EC2 instance

Oct 2019-Dec 2019 Question Answer Modeling Using Deep Learning [Tools: Python, Tensorflow, Keras, NLTK, Spacy, AWS EC2]
- Designed a baseline embedding + extraction question answering model using Name Entity Recognition
- Evaluated the model on cosine similarity and named entity recognition achieving F_1 score of 0.46
- Restructured baseline model utilizing BiDAF for improving answer span attaining F_1 score of 0.58

Jan 2019-Apr 2019 Multi Label Image Classification of Yelp Image Dataset [Tools: Python, PyTorch, OpenCV, Google Colab]
- Implemented CNN-RNN to classify restraunts using images
- Added a layer of SPP(Spatial Pyramid Pooling) to process the image without the need of cropping or resizing
- Compared performances of AlexNet, AlexNet-RNN with and without SPP using F_1 score as a criterion
- Achieved best sequence of labels with AlexNet-RNN having a score of 0.72

TECHNICAL SKILLS

Languages	Python, R, SQL, Java
Databases	MySQL, SQL Sever, PostgreSQL
Packages	Pandas, NumPy, Scikit-Lean, PyTorch, Tensorflow, Keras, Matplotlib, Plotly, NLTK, OpenCV
Machine Learning	Regression, Clustering, Classification, Dimensionality Reduction, Hypothesis Testing, Predictive Modeling, Deep Learning