ANANYE PANDEY

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EDUCATION

Columbia University — **New York, NY**
MS in Electrical Engineering — **Dec 2020**
GPA: 3.6/4.0
Select coursework: Machine and Deep Learning, Parallel Computing, Bayesian learning, Blockchain

Manipal Institute of Technology — **Manipal, KA, India**
BTech in Electronics and Communication Engineering — **Aug 2018**
CGPA: 9.0/10.0
Select coursework: Advanced Digital Signal Processing, Image and Speech Processing, Computer Vision

SKILLS & CERTIFICATIONS

- **Programming**: Python, R, C/C++, Java, SQL, CUDA, OpenCL, MATLAB, Solidity, LabVIEW, Cypher
- **Platforms and Packages:** OpenCV, Keras, TensorFlow, PyTorch, TensorRT, Spark, Docker, DeepStream, Google Cloud Service, Amazon Web Services, AWS Sagemaker, Pandas, Scikit-learn, Git, Databricks, Neo4J
- **Certifications:** Distributed Computing with Spark, Advanced Computer Vision, AWS Machine Learning, Time Series and Prediction, Operating Systems, Image and Video Processing

WORK EXPERIENCE

Data Science Intern, XOKind Inc. (San Diego, CA) — **Jun 2021 – Present**
- XOKind Inc. is a $1.7million-valued start-up in the travel and leisure app-space, working on planning travels using AI and user personalization.
- Working on Recommendation Systems using Python and Neo4J for providing users with in-app travel recommendations, scaling data vertically and working with over 400,000 edges of graph data on AWS and GCP.

Research Assistant, Columbia University (New York, NY) — **Jun 2020 - Aug 2020**
- Implemented various Computer Vision based Deep-Learning models and inference machines on TensorFlow, PyTorch and CUDA for object detection in real time
- Cooperated with GPU Profiling team to determine software and best detection model based on profiling inference machines upon deployment, and wrote custom TensorRT functions to improve inference speed by 25%.

Process Development Engineer, OSRAM Opto Semiconductors (Regensburg, DE) — **Aug 2018 - Jul 2019**
- Improved production efficiency of Laser Diode Testing System by 8% on MATLAB and Python for optimization of laser far-field imaging system using ML algorithms such as clustering and logistic regression in production
- Supervised new laser diode production and development by working with design engineers to relay heat dissipation artifacts to create laser diodes with 8-10% lower heat dissipation by modifying some surface lithography

SELECTED PROJECTS

Columbia University - Intelligent IOT Systems — **Nov 2020**
IOT Connected Smart Lock System
- Constructed an embedded Internet-of-Things connected home smart-lock system with C and MicroPython
- Leveraged Google's Speech-to-Text API to build an Android app to provide security and control over appliances in a house
- Solicited feedback from a cohort of users to develop a robust secure system

Women in Data Science Hackathon 2020 — **Aug 2020**
ICU Mortality Prediction
- Forecasted multi-hospital ICU mortality rates within the first 24 hours of admission by stacking various Machine Learning algorithms such as Logistic Regression, Clustering, Random Forests and SVMs in Python
- Secured an international top 20% with a test prediction accuracy of 90.6%

Columbia University - Neural Networks and Deep Learning — **Nov 2019**
Street View Number Recognition
- Developed a modified Convolutional Neural Network (CNN) to detect house numbers from street view images on TensorFlow, Python
- Prediction accuracy at 92.46% was greater than average human recognition

Columbia University - Heterogenous Computing — **Nov 2019**
Parallel implementation of Principal Component Analysis
- Implemented CUDA kernels to calculate the Eigenvalues and Eigenvectors of any covariance matrix of any dataset using 1-sided Jacobi rotation method using CUDA and Python
- Improved on the serial python implementation by almost 18% for matrices of size over 1000