Aman Singh Thakur

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Education

Manipal Institute of Technology, Udupi, India **Jun 2019**
Secured a Bachelor of Technology in Computer Science & Engineering with Distinction - **(CGPA: 8.41/10)**
Relevant Coursework: Machine Learning, Artificial Intelligence, Natural Language Processing, Social Network Analysis, Algorithms.

Professional Experience

Goldman Sachs, Bengaluru, India **Oct 2020 — Present**
Sr. Analyst, Liquidity Risk Technology

- Developed auxiliary data pipes using Java and Slang (in-house scripting tool) to aggregate client balances across **500,000 funds**. Engineered thresholds on these balances and monitored the threshold breaches to automatically flag aggressive activity.
- Leveraging PURE (internal ORM engine) to build and validate 100+ data contracts to monitor data quality of **20 billion data points** daily.

Morgan Stanley, Mumbai, India **Jul 2019 — Sep 2020**
Software Consultant (Accolite), Prime Brokerage Technology

- Built a spring backend to read incoming email attachments and trade details present in the email bodies to book trades automatically.
- Developed an angular UI to let traders onboard **50+ clients** by accurately tagging identifiers in different email bodies.

CERN-HSF, Remote **May 2019 — Aug 2019**
Student developer, Google Summer of Code (GSoC)

- Constructed an analytical tool that allows scientists at AWAKE (CERN) to index, query and visualize collection of HDF image files effectively captured during the experimental runs.
- Successfully compressed **12TB** of HDF files to 150GB metadata csvs using Spark and Map-Reduce Programming. Wrote python routines using pandas, scit-learn and matplotlib to visualize uncorrupted data **8x faster** by searching efficiently in the metadata index.

Indian Institute of Technology, Kharagpur, India **May 2018 — Jul 2018**
Resarch Intern, Visual Information Processing Lab

- Learnt the decision-making process for the diagnosis of Acute Lymphoblastic Leukemia (ALL) to automate medical prescriptions.
- Researched best machine learning white box models to accurately capture and visualize decisions taken by doctors. Implemented various Decision Trees and improved precision for the CART model to **91% accuracy**, by splitting tree nodes using Gini Impurity index.

Key Projects

Credit Scoring Model for Loan Applicants **Aug 2021**

- Developed Logistic Regression and K-Means classifier that classifies credit applicants into good/bad credit classes based on applicant's probability of reimbursing their financial obligations or defaulting on them.
- Achieved **78% accuracy (Top 5 in batch)** by removing redundancies using Recursive Feature Elimination technique.

Effects of Excessive Alcohol on a Liver **Mar 2018**

- Fabricated ML models in python that uses medical test results and drinking habits to predict the chances of having a liver disorder.
- Pre-processed data to remove outliers and Implemented classification algorithms like Gradient Boosting Classifier,K-Neighbors Classifier and others to find the most accurate model. Optimized Random Forest classifier to yield **80% accuracy** with least false positives.

Market Watch: A Smart Investment Portfolio Builder **Aug 2017**

- Built a trading simulator that would allow **800+ students** to buy/sell real-time stocks based on suggestions backed by historical trends.
- Engineered a large database of critical historical stock attributes and applied Support Vector Machines algorithm to show the probability and direction of movement of stocks today with an **accuracy of 75%**.

Honors & Publication

- Authored & published article on **Analyzing Race/Gender/Job Diversity in the US** for the Nerd for Tech Medium Publication.
- Published open source library **pyawake** and article **GSoC 2019|CERN-HSF|PYAWAKE** as part of the GSoC programme.
- Secured **94% percentile** in All India Graduate Aptitude Test of Engineering for Computer Science in 2019.
- Bagged **3rd position** in a local Technical Paper Conference on the water conservation using heat sensors driven Taps.
- Appointed as the **Technical Head**, Linux Users of Group Manipal Student Body where I conducted workshops highlighting the benefits of open-source technologies and Linux OS to **100+ students** in 2018.

Technical Skills

- **Programming/Scripting/Software** Python, Java, C/C++, JavaScript, Bash, Spring, Flask, Gradle, Angular, React, ORM, Git, CVS
- **Analytics** Spark, Pandas, SQL, Excel, NLTK, TensorFlow, Scikit-learn, R, Azure ML, Tableau, Matplotlib