MOHAMMAD MAHTAB KHAN

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SUMMARY

Experienced in database management, big data systems, ML algorithms, and AWS cloud services.

EDUCATION

Bachelor of Science, Software Engineering (cGPA: 3.8/4.0) **Sep 2019 – May 2024E**
University of Calgary Calgary, Alberta

- Dean's Honours List, 2019-2022.
- Ranked Top 10 in Bay Area Hacks 2020, Calgary Hacks 2020 and 2021, and SEC Hackathon UCalgary 2020.
- Relevant Coursework: Distributed Systems, Data Science for Engineers, Database Management Systems, Software Performance Evaluation, Tensorflow for Deep Learning, Big Data Analysis, and Statistics.

EXPERIENCE

Data Science Intern (Applied Research Team) **May 2022 – Aug 2023**
Pason Systems Calgary, Alberta

- Managed the development and maintenance of a high-scale data analysis software developed in **Python**, utilized by over 2,000 users on a weekly basis, providing critical functionality for daily business operations.
- Spearheaded the creation and deployment of section detection algorithms for industrial process sensors, boosting data processing speed by 17% and accuracy by 15%.
- Implemented K-means clustering algorithms to uncover and analyze patterns in drilling surfaces.
- Enhanced performance analysis by 20% and boosted critical event detection by 22% through sensor data analytics.
- Actively liaised with Pason product managers, designers, and sales representatives to gather project requirements and generate client reports, ensuring effective communication and project alignment on a daily basis.

Software Engineering Research Intern **Jun 2021 – Aug 2021**
University of Calgary Calgary, Alberta

- Researched video data analytics for human biometrics, concentrating on advanced action detection and accurate breathing rate estimation.
- Led the development of user-friendly interfaces for agent-based modeling, simplifying complex modeling processes and enhancing accessibility for interdisciplinary teams.

TECHNICAL PROJECTS

Sign4Good (Bay Area Hacks) **Jul 2020**

- Developed a machine learning model that uses hand-tracking software to record gestures as a .mp4 file fed into a trained neural network. The network converts to plain text output.
- Achieved high validation scores by training our model using **Python** libraries (Keras, OpenCV, and TensorFlow).

Traffic Crash Prediction **Sep 2023 - December 2023**

- Led a Traffic Crash Prediction project using the Databricks platform, handling data extraction, cleaning, and analysis on datasets comprising over 700,000 records.
- Tried and tested multiple supervised ML models to determine the most suitable model. Developed a predictive random forest model using **PySpark**, securing high validation scores in forecasting accident variables.
- Implemented Matplotlib and Seaborn for advanced data visualizations, significantly boosting data-driven decision-making with concise and actionable insights.

TrapEase (entrepreneurship capstone project) **Sep 2023 - Present**

- Strengthened cybersecurity with decoy portals, attracting and identifying threats and compromised credentials.
- Leveraged **AWS services** including EC2 for hosting, RDS for database management, and QuickSight for advanced data visualization, enhancing operational efficiency.
- Adopted agile methodologies to expedite the development of functional software for continuous improvement.

Other notable projects: RouterSim, SplitMergeNet, TicketSystem

SKILLS & INTERESTS

Technical Skills: Python, SQL, Spark, AWS, JSON, ML libs, VS Code (shortcuts too), Github, Docker

Interests & Hobbies: Basketball, Soccer, Golf, Hockey, E-sports, and Table Tennis