

MAHTAB KHAN

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Education

University of Calgary

Sep 2019 – Apr 2024

Bachelor of Science in Software Engineering, with Distinction

Calgary, Alberta

cGPA: 3.8/4.0 (Dean's Honours List 2019-2022)

Relevant Coursework: Data Structures and Algorithms, Database Management Systems, Data Science & AI, Distributed Systems, Scalable Data Analysis, and Statistics

Work Experience

Outlier AI

June – Present

Software Engineer (Contractor)

Remote

- Evaluated and enhanced the quality of AI-generated code, providing human-readable summaries of rationale and solving coding problems with functional and efficient solutions
- Developed robust test cases to confirm the efficiency and effectiveness of code functionality

TrapEase

Sep 2023 – Apr 2024

Co-founder

Calgary, AB

- Raised \$1000 in funding from Hunter Hub for Entrepreneurial Thinking and pitched to 800+ audience members
- Deployed portals using AWS and Azure, increasing threat detection and compromised credentials identification by **40%**
- Optimized operational efficiency by integrating AWS services, including EC2 for scalable hosting, RDS for database management, and Power BI for dynamic data visualization, achieving a 30% reduction in data processing times

Pason Systems

May 2022 – Sep 2023

Data Science Intern

Calgary, Alberta

- Managed the software development of a data analysis tool developed in **Python**, serving **2,000+** weekly users
- Initiated and deployed section detection algorithms, enhancing data processing speed by 20% and accuracy by 15%, resulting in a weekly saving of 6 hours of manual work
- Converted solutions to Python to process time-series data (1s, 10s, and 60s intervals), enabling faster KPI generation
- Evaluated multiple clustering algorithms, selecting K-means to analyze patterns in drilling surfaces
- Collaborated with PMs, automation engineers, and account managers to gather requirements and implement features

University of Calgary

Jun 2021 – Aug 2021

Software Engineering Research Intern

Remote

- Researched video data analytics for human biometrics, focusing on action detection and breathing rate predictions
- Led the creation of intuitive, user-centric interfaces for agent-based modeling systems, improving usability and facilitating cross-disciplinary team collaboration

Technical Projects

Sign4Language (Ranked top 10 in Bay Area Hacks)

Python | Tensorflow | Keras | Pandas

- * Developed a gesture recognition CNN model, recording hand movements and translating it to plain text
- * Successfully trained the machine learning model on a comprehensive self-created dataset, achieving a 94% accuracy rate

Traffic Crash Prediction 🚗

PySpark | Matplotlib | Pandas | Scikit-learn | Databricks

- * Led the project by deploying it on **Databricks** platform, handling data extraction, cleaning, and analysis on datasets comprising over 700,000+ records retrieved through its API
- * Developed a predictive random forest model using PySpark, securing high validation scores in forecasting accidents

Technical Skills and Interests

Languages: Python, C, C++, SQL, JavaScript, Java, JSON

Developer Tools: AWS, Azure ML, Azure Databricks, Postman, Plotly, LlamaIndex, Power BI, Git

Libraries/Frameworks: PySpark, Tensorflow, Scikit-learn, Numpy, Seaborn, Pandas, PyTorch, Keras, Node.js