# Mahtab Khan

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github.com/Mmahtab10

## Education

**University of Calgary** **September 2019 – May 2024**
Bachelor of Science in Software Engineering, with Distinction Calgary, Alberta

**cGPA: 3.8/4.0** (Dean's List 2019-2024)

**Relevant Coursework**: Software Design, Data Structures and Algorithms, Web-Based Systems, Database Management Systems, Distributed Systems, Scalable Data Analytics, Software Performance Evaluation, Computer Networks

## Experience

**Outlier AI Inc.** **June 2024 – Present**
Software Engineer Remote

- Evaluated and enhanced the quality of AI-generated code in **Python** and **SQL**, providing documentation and solving coding problems with efficient solutions, resulting in a 30% decrease in bug reports from QA testing
- Automated testing procedures and developed robust test cases for new code releases, improving code standards and reducing bugs by 15%

**TrapEase (Cybersecurity Startup)** **July 2023 – April 2024**
Software Engineer/Co-founder Calgary, AB

- Co-founded a cybersecurity startup, secured $1,000 in funding and pitched to an audience of 500+ stakeholders
- Maintained and optimized web and mobile applications, leading to a 15% decrease in load times
- Integrated AWS cloud services to analyze user behavior patterns and identify potential threats, reducing false positives by 60% and increasing overall accuracy by 80%

**Pason Systems Inc.** **May 2022 – September 2023**
Data Science Intern (Applied Research) Calgary, Alberta

- Collaborated in a team of 8 in **Agile** to develop a data analysis tool in **Python**, utilized by over 2,000 weekly users
- Designed and deployed section detection algorithms, enhancing data processing speed by 17% and accuracy by 15% resulting in a weekly saving of 9 hours of manual work
- Converted monolithic systems to microservices by developing **RESTful** APIs with **TLS** encryption for communication
- Engineered real-time data processing solutions at 1s, 10s, and 60s intervals, designing custom **API** endpoints that integrated with internal systems to provide real-time access to KPI data
- Collaborated closely with developers to identify edge cases and implement unit and functional tests, ensuring high code reliability and quality, resulting in a 25% improvement in code coverage and a reduction in production bugs
- Conducted code reviews to ensure quality and modularity in production updates, while effectively navigating and contributing to large-scale codebases

**University of Calgary** **June 2021 – August 2021**
Biometric Software Research Associate Remote

- Designed and developed intuitive and user-friendly interfaces using React.js, focusing on enhancing accessibility

## Technical Projects

**Distributix (Distributed Ticketing System) ○** **AWS | Tailwind CSS | Python | Redis | Typescript**

- Engineered a scalable and fault-tolerant platform on AWS using a microservices architecture, leveraging replica deployment and database replication across multiple instances

**Property Management System ○** **Node.js | Next.js | Docker | Git | MySQL**

- Led the development of a Node.js platform with a scalable AWS backend and designed APIs integrated with database

## Technical Skills

**Languages**: Python, C, C++, SQL, JavaScript, TypeScript, Java, GraphQL

**Developer Tools**: AWS, Npm, Jira, Git, Docker, Postman, Selenium, Jest, Linux, Redis

**Libraries/Frameworks**: React.js, PySpark, Node.js, JUnit, Pandas, Django, Remix, Redux