

# PARHAM ESMAEILY

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## Skills

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**Programming:** | C++ | Python | Java | JavaScript | TypeScript | C# | HTML | CSS | React | Three.js | NodeJS  
| Ruby | Prolog | SQL | NoSQL | MySQL | DBMS | RESTful API | Git | Azure | Cloud Computing  
| OOP | CI/CD | AWS Lambda | Operating System | Frontend | Backend | Full-Stack  
| Microservices | Agile Software Development | Data Structures & Algorithms | System Design

**AI:** | TensorFlow | PyTorch | Scikit-Learn | LightGBM | Pandas | NumPy  
| Matplotlib | NLP | OpenCV | CNN | Neural Networks | Deep Learning  
| Optimization | Supervised Learning | Unsupervised Learning  
| Backpropagation | Gradient descent | AI Deployment | Machine Learning | LLM

**Languages:** | English | French | Persian |

## Education

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- Bachelor of Computer Science                      Concordia University                      Montreal
- Solutions Architect Associate                      Amazon Web Services (AWS)                      Montreal

## Experiences

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**Software developer Intern**    **CAE**    Montreal

- Assisted with the implementation of new algorithms in C++ & Java to optimize system processes, contributing to a 60% decrease in processing time for internal software tasks.
- Developed a feature to search and display coordinates directly from the app using Google Maps API, enhancing user navigation capabilities and reducing location lookup time by 40%.
- Debugged advanced data sorting menu using JTables and WindowBuilder in Java by adding dynamic presets.
- Delivered daily project updates and monthly feature showcases to team members, improving team alignment, reducing project delays, and improving team's agile development Velocity by 15%.
- Leveraged Jira and SmartGit for project management, ensuring timely completion of milestones and maintaining a high standard of code quality throughout the development cycle.

**Avionics Developer**    **Space Concordia**    Montreal

- Configured Development Environment: Set up and maintained a programming environment using MCUXpresso IDE and Embedded Studio for J-Link debugging, improving development efficiency and reducing setup time by 30%.
- Developed a Python data collection & analysis system on Raspberry Pi by implementing code for sensors for wind, GPS, humidity, and temperature, gathering data via serial and network communications. Utilized Python libraries (smbus, pandas, matplotlib, MQTT) to process, store, and analyze data, enhancing rocket launch recovery accuracy.

## Selected Projects

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- **RiskBoardGame** ([GitHub](#)): Led a team of 5 students in design and development of Risk project assignment in C++ and achieved 100% in grading with effective project management techniques, and technical skills.
- **Crypto tracker** ([GitHub](#)): Personal Crypto prices website by leveraging the CoinGecko RESTful API. Tech Stack: React, React Router, TailwindCSS, API, Axios, Javascript, HTML/CSS.
- **ComputerVision Hough and Homography** ([GitHub](#)): Developed scripts for detecting straight lanes using the Canny edge detector & Hough Transform. Implemented SIFT for keypoint matching, RANSAC for homography estimation, and used the homography matrix for image warping and compositing in an Augmented Reality application.