

# Apisán Kaneshan

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## EDUCATION

### University of Waterloo

*Master of Engineering, Electrical Computer Engineering*

Waterloo, ON

Sep. 2025 – Aug. 2027

- **Specialization:** Machine Learning/Artificial Intelligence, Business Leadership
- **Relevant Courses:** Intro to Artificial Intelligence, Algorithm Design and Analysis, Management and Leadership

## TECHNICAL SKILLS

**Languages:** Python, Java, C, C++, SQL, JavaScript, Bash, Swift, HTML, CSS, MATLAB, Pearl

**Frameworks:** OpenCV, TensorFlow, Hugging Face, Scikit-learn, NumPy, Pandas, Matplotlib, Node.js, Django, SystemC

**Tools:** Git, CI/CD, Docker, Kubernetes, AWS, GCP, Azure, Linux, Unix, FFMPEG, Visual Studio, PyCharm, Eclipse

**Networking & Security:** TCP/UDP, NGINX, RTMP, HLS, SSH tunneling, Packet analysis, Wireshark, LDAP

## EXPERIENCE

### Software Engineer

*Statistics Canada*

Oct. 2024 – Present

*Toronto, ON*

- Secured \$1M funding by delivering effective demos to directors, simplifying technical concepts, and showing impact
- Led a team of 3 on automated survey creation in a React app, leveraging JavaScript and custom-built algorithms
- Created an Excel-based specification tool which reduced development time of questionnaire creation by 70% by that automated manual questionnaire creation and enabled broader user participation through Excel's accessibility
- Integrated a NLP and LLM into a test automation tool for questionnaires and created feature reports
- Built end-to-end CI/CD system for all projects to ensure long-term maintainability and scalability

### DevOps Engineer

*Bell*

May 2024 – Aug. 2024

*Toronto, ON*

- Translated legacy Bash scripts to Ansible playbooks, improving code maintainability and facilitating easier handover to other teams, which standardized server configurations and reduced the risk of manual errors
- Integrated management alarms with Slack to enhance real-time monitoring and incident response, ensuring critical alerts are promptly communicated to the team and increasing responsiveness to system events
- Engineered and automated infrastructure management processes using Ansible, significantly enhancing deployment speed and consistency across multiple Unix servers, leading to reliable and more consistent infrastructure changes

### Software Developer

*Bell*

May 2023 – Aug. 2023

*Toronto, ON*

- Refactored inventory systems migration from Django to PyNetbox and PyMongo, accelerating database migration
- Standardized data structures for 6.8k sites and 128k devices, improving data organization for efficient searching
- Reduced 10% in manual overhead by developing Python scripts for automated daily execution
- Improved overall efficiency by 15% by implementing advanced regex techniques to filter and process large datasets

## PROJECTS

### Diabetic Retinopathy Detection | *Python, TensorFlow, NumPy, Pandas, CNN*

Sept. 2025 – Present

- Led data collection, cleaning, and preprocessing pipelines, ensuring high-quality inputs for model training
- Conducted weekly literature reviews and research presentations to compare existing approaches and identify concrete improvements to model architectures, training regimes, and dataset curation

### QueueView - Live Streaming Application | *Node.js, C, Python, FFMPEG, NGINX, AWS*

Apr. 2025

- Led a team of 4 to develop a real-time livestreaming platform which assesses crowd levels at venues
- Configured a Raspberry Pi with additional modules to stream from any location on boot to EC2 NGINX server
- Deployed the project as microservices to ensure each team member could work at their own pace

### Guidance Counselor AI | *Python, TensorFlow, Llama 3.2, Hugging Face, React.js, Node.js*

Dec. 2024 – Present

- Created a neural network using TensorFlow to predict best suited universities based on given preferences
- Leveraged existing AI tools such as Perplexity to do web-scraping and collect data on post secondary schools

### Waste Classification App | *Computer Vision, Python, OpenCV, TensorFlow*

Dec. 2024

- Implemented transfer learning on a pre-existing classification model to distinguish between organics and recycling
- Leveraged TensorFlow's APIs to import base model from MobileNetV2 and to manipulate images from dataset