

# Apisan Kaneshan

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## EDUCATION

<b>University of Waterloo</b> <i>Master of Engineering, Electrical Computer Engineering</i>	Waterloo, ON Sep. 2025 – Aug. 2027
<ul style="list-style-type: none"><li>• <b>Specialization:</b> Machine Learning/Artificial Intelligence, Business Leadership</li><li>• <b>Relevant Courses:</b> Intro to Artificial Intelligence, Algorithm Design and Analysis, Management and Leadership</li></ul>	

## TECHNICAL SKILLS

<b>Languages:</b> Python, Java, C, C++, SQL, JavaScript, Bash, Swift, HTML, CSS, MATLAB, Pearl
<b>Frameworks:</b> OpenCV, TensorFlow, Hugging Face, Scikit-learn, NumPy, Pandas, Matplotlib, Node.js, Django, SystemC
<b>Tools:</b> Git, CI/CD, Docker, Kubernetes, AWS, GCP, Azure, Linux, Unix, FFMPEG, Visual Studio, PyCharm, Eclipse
<b>Networking &amp; Security:</b> TCP/UDP, NGINX, RTMP, HLS, SSH tunneling, Packet analysis, Wireshark, LDAP

## EXPERIENCE

<b>Software Engineer</b> <i>Statistics Canada</i>	Oct. 2024 – Present Toronto, ON
<ul style="list-style-type: none"><li>• Secured \$1M funding by delivering effective demos to directors, simplifying technical concepts, and showing impact</li><li>• Led a team of 3 on automated survey creation in a React app, leveraging JavaScript and custom-built algorithms</li><li>• 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</li><li>• Integrated a NLP and LLM into a test automation tool for questionnaires and created feature reports</li><li>• Built end-to-end CI/CD system for all projects to ensure long-term maintainability and scalability</li></ul>	
<b>DevOps Engineer</b> <i>Bell</i>	May 2024 – Aug. 2024 Toronto, ON
<ul style="list-style-type: none"><li>• 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</li><li>• 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</li><li>• 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</li></ul>	
<b>Software Developer</b> <i>Bell</i>	May 2023 – Aug. 2023 Toronto, ON
<ul style="list-style-type: none"><li>• Refactored inventory systems migration from Django to PyNetbox and PyMongo, accelerating database migration</li><li>• Standardized data structures for 6.8k sites and 128k devices, improving data organization for efficient searching</li><li>• Reduced 10% in manual overhead by developing Python scripts for automated daily execution</li><li>• Improved overall efficiency by 15% by implementing advanced regex techniques to filter and process large datasets</li></ul>	

## PROJECTS

<b>Diabetic Retinopathy Detection</b>   <i>Python, TensorFlow, NumPy, Pandas, CNN</i>	Sept. 2025 – Present
<ul style="list-style-type: none"><li>• Led data collection, cleaning, and preprocessing pipelines, ensuring high-quality inputs for model training</li><li>• Conducted weekly literature reviews and research presentations to compare existing approaches and identify concrete improvements to model architectures, training regimes, and dataset curation</li></ul>	
<b>QueueView - Live Streaming Application</b>   <i>Node.js, C, Python, FFMPEG, NGINX, AWS</i>	Apr. 2025
<ul style="list-style-type: none"><li>• Led a team of 4 to develop a real-time livestreaming platform which assesses crowd levels at venues</li><li>• Configured a Raspberry Pi with additional modules to stream from any location on boot to EC2 NGINX server</li><li>• Deployed the project as microservices to ensure each team member could work at their own pace</li></ul>	
<b>Guidance Counselor AI</b>   <i>Python, TensorFlow, Llama 3.2, Hugging Face, React.js, Node.js</i>	Dec. 2024 – Present
<ul style="list-style-type: none"><li>• Created a neural network using TensorFlow to predict best suited universities based on given preferences</li><li>• Leveraged existing AI tools such as Perplexity to do web-scraping and collect data on post secondary schools</li></ul>	
<b>Waste Classification App</b>   <i>Computer Vision, Python, OpenCV, TensorFlow</i>	Dec. 2024
<ul style="list-style-type: none"><li>• Implemented transfer learning on a pre-existing classification model to distinguish between organics and recycling</li><li>• Leveraged TensorFlow's APIs to import base model from MobileNetV2 and to manipulate images from dataset</li></ul>	