Nuthanan Tharmarajah

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EDUCATION

University of Waterloo   Waterloo, ON
Bachelor of Software Engineering   *Aug. 2024 – May 2029*
- **GPA:** 3.99/4.0
- **Activities and Societies**: UW Formula Electric, Model United Nations, Tamil Student Association

TECHNICAL SKILLS

Languages: Java, Golang, Python, C/C++, JavaScript, Typescript, HTML/CSS
Frameworks: React, Node.js, Firebase, TailwindCSS, Bootstrap, Flask, Next.js, FastAPI, PyTorch, Tensorflow, Keras
Cloud & Tools: Google Cloud Platform (GCP APIs, OCR, Storage), AWS, Docker, Git, 1Password, Stream Deck

EXPERIENCE

Software Development Engineer   May 2025 – Present
Guelph Eye MD   *Guelph, ON*
- Collaborated with medical staff to automate **10+ staff workflows** with **Golang**, cutting task time by **30%**
- Built a fax automation tool with a **Golang backend** and **Electron desktop app** to display parsed fields, integrating **StreamDecks** for workflow control and **GCP OCR** for fax parsing, reducing manual work by **90%**
- Refactored backend and CI/CD pipelines, removed direct production edits, integrated **1Password** for secrets management, boosting system **availability and reducing risk**

Lead Website Developer   May 2025 – Present
SSICSIM 2025   *Toronto, ON*
- Built the official SSICSIM website using **React and TailwindCSS**, improving usability for **300+ delegates**
- Established a **feedback loop with 80+ staff**, applying user-centered design principles to iteratively refine UI
- Optimized system performance and reliability by integrating the **AWS Cloudfront CDN**, designing for **scalable load distribution** and **fast page delivery** across **8,000+ monthly pageviews**

Lead Website Developer   June 2024 – August 2024
K&T Construction Service   *Toronto, ON*
- Developed a responsive website using **HTML and CSS** to showcase the company's services and projects
- Engaged with **20+ staff** to gather requirements of website application **through surveys** to ensure alignment with client needs and expectations, improving website engagement by **47%**
- Increased website traffic by **30%** over three months by optimizing load times and SEO using **Google Analytics**

PROJECTS

Teabag | *Next.js, Typescript, TailwindCSS, Python, Flask, Firebase, Langchain* ↗   January 2025
- Developed an accessible **Next.js** web app with **TypeScript and TailwindCSS**, enabling users to input and receive summarized stories via speech or text, improving inclusivity for diverse user needs
- Integrated **SpeechRecognition** React library and **Cohere API** using **Flask** for real-time voice transcription and AI-driven story summarization
- Implemented **Firebase Firestore** for data storage, allowing users to retrieve and extend previous conversations

AI Skin Cancer Detection | *Matplotlib, Pandas, PyTorch* ↗   July 2023 - August 2023
- Programmed a **convolutional neural network (CNN)** model on a skin cancer dataset using **PyTorch** to identify seven different skin lesion types, enhancing accuracy through rigorous testing and tuning
- Preprocessed each dataset to contain **5000 images per lesion** using **PyTorch's** data augmentation feature, ensuring uniformity during training, improving accuracy by **14%**
- **Fine-tuned** and compared **ResNet50 and DenseNet121** neural network models to fit task using **Matplotlib**, resulted in a **74% accuracy** using the ResNet50 model

Community Creator | *React, Flask, Python, Tailwind CSS, Cohere API* ↗   April 2022 - May 2022
- Developed a web app using **React and TailwindCSS** to deliver feedback on community sustainability practices
- Implemented a **Flask** back-end with **Cohere API** to generate personalized suggestions based on user input
- Used **JSON and JavaScript** to store user responses and handle requests to **Cohere API** for data retrieval