

# Elili Marakathalingasivam

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## EDUCATION

### BASc in Systems Design Engineering

University of Waterloo (Cumulative Average 90.7%)

Waterloo, ON

Sept 2023 - June 2028

## SKILLS

**Languages:** Java, Python, C++, C#, HTML, CSS, Javascript, Typescript, LaTeX

**Relevant Courses:** Digital Computation, Data Structures and Algorithms, Human Factors in Design, 3D VR/AR (HS)

**Other:** React.js, React Native, Node.js, TensorFlow, Unity 3D, Git, Bitbucket, Arduino, PyTorch, Streamlit, Maya

## EXPERIENCE

### Full Stack Developer, Deep Trekker

Sept 2024 - Present

- Built custom scroll-based animations using Splide.js and Next.js in a Node.js environment, resulting in a 25% increase in user time spent on site and a 10% rise in page interaction rates.
- Developed a reusable 360-degree model viewer and scroll animation comparison chart module in React TypeScript and created custom data adapters to integrate Contentful data into React components.

### VP of Talent, UW Blueprint

Sept 2024 - Present

- Leading recruitment and managing member and alumni information for UW Blueprint, a student-run organization offering free software solutions to organizations that provide social good.
- Proposed a new recruitment process reducing time by 20%, approved by leadership and set for implementation.

### Designer, Deep Trekker

Jan 2024 - April 2024

- Redesigned all Deep Trekker main product pages using extensive user experience research and out-of-the-box design, boosting product page engagement by an average of 22% and increasing click-through rate by 7%.
- Performed A/B testing and UX analysis, resulting in a 12% conversion rate increase. Impressed by the results, management implemented my analysis approach as the new standard for future projects across the team.

## PROJECTS

### Real World Design Challenge | 1st in Canada, 3rd Internationally

- Engineered a dual-rotor autonomous delivery drone with a 5kg payload using underactuated rotor motion.
- Led the team as Project Manager by organizing tasks with Gantt charts, using algorithmic problem-solving to break up the large problem, and developed a plan that re-motivated the team during ideation challenges.
- As Lead Physicist, performed detailed drone calculations (thrust-to-weight ratio, drag analysis, among others), validated by aerospace engineers to ensure design feasibility, contributing to an 80-page technical report.

### EMGirls Worldwide Entrepreneurial Competition | 1st Internationally

- Proposed a fridge-tracking app with OCR technology for automatic produce entry, sorting, and expiry alerts, aimed at reducing household food waste, which increased by 13.5% since the start of the pandemic.
- Invited as a guest speaker on the EMGirls podcast, with 500+ active listeners, where I shared insights on navigating the engineering and entrepreneurial fields, encouraging the next generation of women to pursue careers in STEM.

### GoosePeek | Hack the North Developer

- Collaborated with team to create a Chrome extension using React, HTML, TailwindCSS, Node.js, and Cohere API to monitor browsing behavior with real-time goose-themed pop-ups, used by myself and my peers to boost focus.
- Implemented functionality where pop-ups grow larger, and geese become angrier as users visit off-task sites, with added screen lag to discourage distractions and improve task alignment.

### EduMe | GenAI Genesis Developer

- Developed an AI-powered education platform using Python, OpenAI, and YouTube APIs to generate personalized learning content tailored to users' learning styles, improving accessibility for students with disabilities.
- Integrated text-to-speech for auditory learners and designed a quiz system to assess user learning, with data used to continuously enhance the platform's personalized recommendations.

## EXTRACURRICULARS

**Women in Engineering** - Supports women and non-binary engineers, empowering the next generation of leaders in STEM.

**Bannisangam** - Funds post-secondary education for underprivileged children (particularly young women) in Sri Lanka.