

# Martin Zukowski

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## TECHNICAL SKILLS

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**Programming Languages:** Go, Python, C/C++, Assembly, JavaScript/TypeScript, HTML/CSS

**Frameworks:** ReactJS, Tailwind, ThreeJS, Springboot, Bootstrap, Express, Next.js

**Others:** Git, MongoDB, SQL, Figma, Render, Docker, AWS, REST API, OpenAI API, Finnhub API, Vercel, Node.js, LaTeX

## PERSONAL PROJECTS

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### AI Stock Advisor | FULL STACK PROJECT

March 2025

- A real-time stock recommendation platform using Next.js, Express, and MongoDB; deployed via Vercel and Render.
- Processed over 1,000 live price updates/day with Finnhub and OpenAI APIs for sentiment-driven suggestions.
- Improved user decision time by 70% via grouped portfolio insights, autocomplete ticker search, and AI summaries.

### Full Stack Website | Akwraps.ca

August 2024

- Developed a web service and database used by over 500 customers, increasing website impressions by 250%.
- Implemented Thymeleaf for server-side rendering, enhancing deployment efficiency by 30% using Docker.
- Utilized ThreeJS to create interactive car models and wraps to enhance user experience.

## TECHNICAL PROJECTS

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### Machine Learning and Neural Network Models | CMPT 310, SFU

April 2025

- Built and trained supervised models to solve digit & binary classification, regression, and language identification.
- Implemented Naive Bayes with Laplace smoothing, Perceptron, and custom neural networks (FFNN and RNN) using autograd, achieving 97.5%+ and 85%+ accuracy on MNIST and language tasks respectively.
- Tuned hyperparameters (learning rate, layer size, activation) and applied gradient-based optimization with backpropagation for all models.

### RISC-V Disassembler | CMPT 295, SFU

December 2023

- Developed a RISC-V processor to explore how processors execute instructions at the hardware level.
- Implemented custom SLT-type instructions using C/C++/Assembly to extend base functions, enhancing processing capabilities by 15%.

## EXPERIENCE

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### Grouse Mountain | Mountain Ops | North Vancouver, BC

November 2024 - Present

- Delivered exceptional service to a diverse clientele, honing communication, teamwork, and conflict-resolution skills in a dynamic, high-traffic environment.

## VOLUNTEER EXPERIENCE

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### Member

### Competitive Programming Club | Burnaby, SFU

September 2024 - Present

- Solved weekly algorithm and data structures challenges, improving speed and accuracy with DP, graphs, and greedy methods.
- Practiced competitive programming on LeetCode, strengthening problem-solving efficiency and pattern recognition.

## EDUCATION

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### Simon Fraser University | Burnaby, BC

September 2022 - Present

BSc. Degree Computer Science