Stephanie Li

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HIGHLIGHT OF QUALIFICATIONS

Languages: SQL, C, Python, Java, JavaScript, Haskell, HTML/CSS, MATLAB
Skills: Full stack, DevOps, CI/CD, project management, QA, software development life cycle, UI/UX design, graphic design
Tools: React.js, Node.js, Git, Webflow, Figma, Adobe Photoshop, Adobe Illustrator, Excel, PowerPoint
Awards: Selected to represent **Team Canada** in the FIRST Global Challenge out of 598 robotics teams; awarded at 2 hackathons

EDUCATION

McMaster University **Expected Graduation: May 2028**
Bachelor of Applied Science in Computer Science (Coop) *Hamilton, ON*

- Courses: Software Design Using Web Programming, Development Basics in C, Programming in Python, Computational Thinking in Haskell, Discrete Mathematics for Computer Science, Linear Algebra, Calculus

PROJECTS

PaperStrings - Virtual Guitar Simulator For Kids | *Source Code* | *Presentation* **OpenCV | MediaPipe | Keras |Python**

- Developed a guitar simulator for children, leveraging **OpenCV**, a custom-trained **Keras** model, and **MediaPipe** to detect basic chord shapes on a printable paper guitar with over **80% accuracy**
- Enabled **real-time auditory feedback** and **strum detection** with Python's **Pyglet** library, eliminating the need for physical instruments and enhancing **music education accessibility for children in underfunded schools**

Amiguru - Crochet Pattern 3D Modeler | *Website* | *Source Code* **Haskell | C | ThreeJS | ReactJS | MySQL**

- Developed a **domain-specific language** (DSL) in Haskell to **convert written amigurumi crochet patterns into 3D** mesh visualisations using Three.js through the application of graph theory, utilising Dijkstra's algorithm to find the shortest path between stitch "nodes" and compute the relative stitch positions in **$O(V^2)$ time complexity**
- Integrated **MySQL** to store and query a **dataset of over 1,000 yarn and hook entries** from the **Ravelry API**, enabling designers to predict material costs based on yarn weight and hook size

EXTRACURRICULARS

FIRST Tech Challenge Team Bearbella **Jun 2023 – Jun 2024**
Programmer and Outreach *Scarborough, ON*

- Trained a **machine learning model** using **TensorFlow** to detect game pieces and optimise an autonomous path, increasing scoring from 20 points to 50 points with ~80% accuracy; **ranked 93rd percentile in Ontario** for autonomous scoring
- Worked in a team of 15 students to design, build, and code a high-performance bot, committing 25+ hours per week to team build sessions as well as interview prep, winning us **Inspire 3rd** at Ontario Provincials
- Mentored 15 students weekly in FIRST LEGO League, offering expertise on programming and game strategy
- **Selected to represent Team Canada** in the 2024 FIRST Global Challenge (1 out of 598 Canadian teams)

Girls For STEM **Jun 2023 – Jun 2024**
Student Mentor *Scarborough, ON*

- Coordinated with **UOttawa Engineering Outreach** to launch **CUB HACKS**, a blockcode hackathon for middle schoolers
- Directed Scratch programming workshops in 3 elementary schools in Scarborough as part of Girls For STEM's Blockcode Week, successfully introducing **100+ middle schoolers** to variables, functions, graphics output, and syntax in programming
- Organised daily Zoom Q&A sessions to offer one-on-one support to youths and help debug code

AliceHacks **Apr 2023 – Jun 2024**
Marketing Organiser *Scarborough, ON (Hybrid)*

- Designed graphics using **Figma** and **Illustrator** for social media posts, sponsorship packages, and the website, ensuring consistent branding and messaging across all platforms
- Fostered relationships with youth-led hackathons to build a mutual reposting network, **increasing engagement by +845%**
- Successfully engaged **250+ high school hackers** across **29 countries**