Jennie J.Y. Chen

Multidisciplinary engineer with expertise in human-computer interaction, embedded systems, and data analysis. Experienced in research, hardware/software development, and technical leadership. Passionate about solving complex problems through a blend of engineering, creativity and user-centered design.

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jennie0chen@gmail.com | (514) 898-8012 | Vancouver, BC | Portfolio

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EDUCATION

MASc Electrical and Computer Engineering
University of British Columbia, 2025 | *Supervisor*: Dr. Sidney Fels
Thesis Title - Revisiting the Steering Law: Curvature, Complexity, and the Path to a New Predictive Model
Cumulative Average: 93.4

B.Eng Electrical Engineering
McGill University, 2021
Minor: Biomedical Engineering
CGPA: 3.64/4.0

PUBLICATIONS

Curves Ahead: Enhancing the Steering Law for Complex Curved Trajectories | **Best Paper Award*
CHI '25: Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems
An extension of the classic Steering Law to better account for curved trajectories by introducing total curvature (K) in the movement time prediction equation.
https://doi.org/10.1145/3706598.3713102

WORK EXPERIENCE

Graduate Teaching Assistant – CPSC 319: Software Engineering Project
UBC Computer Science Department | 2024 - 2025

- Mentored 2–3 student teams per term through the full software development lifecycle.
- Acted as a liaison between students and sponsors, ensuring clear communication of project expectations.
- Assessed technical reports and designs, providing actionable feedback.

Graduate Teaching Assistant – CPSC 314: Computer Graphics
UBC Computer Science Department | 2022 - 2023

- Created study materials and summary notes to support student learning.
- Led lab sessions, graded assignments, and maintained class engagement.

Research Assistant – Aerospace Mechatronics Lab
McGill University | 2020 – 2021

- Developed hardware for motor-propeller speed sensing in UAV systems.
- Contributed to UAV firmware research for regenerative braking.

Aircraft Systems Specialist Intern

CAE Inc. | 2020

- Resolved client issues related to simulation software suites.
- Designed and validated simulation systems for the A429 avionics buses.

Research Assistant – Shared Reality Lab

McGill University | 2019

- Engineered a wearable device using the thermal grill illusion for temperature perception studies.
- Developed a fingertip rehabilitation device with force control capabilities.

ACTIVITIES

VP Social

UBC Electrical and Computer Engineering Graduate Student Association | 2022 - 2023

- Organized 18+ graduate student events for the graduate student body, including Teahouse socials, Scavenger Hunts, BBQs, game/movie nights, and the End-of-Year Masquerade Gala.
- Averaged 50+ participants per event.

Lab Ambassador

UBC Electrical and Computer Engineering Department | 2022 – 2025

- Participated in monthly departmental discussions addressing graduate student issues.
- Acted as the HCT lab representative by voicing members' feedback and relaying concerns.

Avionics Subteam Lead

McGill Rocket Team | 2017 – 2021

- Created and led the Flight Computer project using STM32, GPS, IMUs, and radios to manage positioning, telemetry, and ejection events.
- Co-led Power Management and Ejection system development, ensuring reliable voltage supply and hardware/software trigger mechanisms.
- Led the video recorder project, integrating a Raspberry Pi-controlled camera to capture launch-to-landing footage.

AWARDS

- **Best Paper Award**, CHI '25 Conference on Human Factors in Computing Systems | 2025
- **Dean's Guidelines Extra-Curricular Contribution Award**, University of British Columbia | 2023
- **British Columbia Graduate Scholarship**, BC Ministry of Advanced Education | 2023
- **Excellence Bursary for Computer Science and Engineering**, Quebec Ministry of Higher Education | 2021
- **Mr. & Mrs. Lee Hee Chong and Mr. & Mrs. David Su Toye SURE Award**, McGill University | 2020
- **Rubin Gruber SURE Award**, McGill University | 2019

SKILLS

- **Software:** Python, C/C++, C#, MATLAB, JavaScript/HTML/CSS (basic)
- **Hardware:** STM32, circuit prototyping/testing, sensor integration, signal processing, embedded systems
- **Tools & Platforms:** Git, LaTeX, Figma, Procreate, Jupyter Notebook, Adobe Illustrator/Premiere Pro
- **Data & Research:** Experimental design, regression analysis, quantitative modeling, user testing, modeling
- **Soft Skills:** Project leadership, conflict resolution, mentoring, technical communication/presentation
- **Languages:** English (native), French (native), Mandarin (conversational), Spanish (basic)
- **Interests:** Pottery, running, tennis, crochet/knitting, digital art, singing, music production, video editing