

Shenghua Jin

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SKILLS

Tools: Fusion 360 (CAD), Ansys HFSS, Git, Jupyter Notebook, ROS 2, Docker, Linux

Languages: Java, Python, C++

Machine Learning: OpenCV, YOLOv12, Pandas, NumPy

EDUCATION

Simon Fraser University

Bachelor of Science in Computing Science

CGPA: 4.17/4.33

Relevant Coursework: CMPT 419 Robotic Autonomy (Docker, Control Theory)

Burnaby, BC

2025 - 2029 (Expected)

EXPERIENCE

Artiverse | *Data Annotator*

October 2025 – Current

- Annotated over 800 models to expand a high-fidelity 3D dataset of articulated, functional objects.
- Refined object kinematics by identifying correct joint types and calibrating component ranges of motion.
- Developed scripts to convert files to URDF for use in simulations.

Ascension Robotics | *Computer Vision Engineer*

September 2025 – Current

- Developing a real-time armor panel detection system in a Linux environment to automate aiming mechanisms by tracking and predicting enemy robot motion.
- Leveraging the OpenCV library to manipulate image data and extract precise coordinates and angular orientation for targeting.
- Curated and labeled a dataset of approximately 7,000 images to train and optimize a YOLOv12 detection model.

Robokids | *Robotics Instructor*

September 2025 – Current

- Instructed students in robotics fundamentals across varying class sizes, utilizing Lego Mindstorm EV3, NXT, and Tetrix platforms.
- Facilitated a project-based curriculum emphasizing mechanical design and engineering problem-solving techniques.
- Fostered a safe and engaging learning environment, resulting in consistent positive feedback from students and parents.

Team Parabellum | *Team Captain*

September 2022 – July 2025

- Directed the end-to-end engineering of a competitive FTC robot, successfully qualifying for and competing at the European Premier Event.
- Engineered robot mechanisms with Fusion 360 CAD, custom manufacturing, and specialized components such as capstan drives.
- Programmed autonomous routines in Java, implementing path planning and precise motor control via PID loops and command-based structures.

HACKATHONS

HardHq '25 | *Super Conducting Qubit Design 1st Place*

November 2025

- Designed a fabrication-ready, single-qubit superconducting processor with a specialized focus on substrate material properties.
- Conducted Finite Element Analysis (FEA) using ANSYS HFSS to optimize impedance matching, E_j/E_c ratios, and dispersive coupling strength.

SFU DSSS Datajam (DataDingers) | *Most Effective Solution*

October 2025

- Analyzed a baseball dataset to predict optimal batting length and speed, and identify target areas to improve hard-hit probability.
- Trained and evaluated random forest, logistical regression, and XGBoost to determine the optimal model.
- Leveraged Python libraries like numpy and pandas in Jupyter notebook to manipulate data and present visuals.

SFU Stormhacks (EcoDepot) | *Surge Choice Award | Sustainable Engineering Track*

October 2025

- Prototyped an automated waste sorting system that incentivizes recycling by refunding users for deposited cans and bottles.
- Integrated a custom-trained computer vision model for object classification with a 3D-modeled mechanical sorting assembly.