

Dean David Menkis

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SKILLS

Robotics & Embedded: Kawasaki AS, K-IDE, K-Roset, ESP32, Raspberry Pi

Industrial Automation: Beckhoff TwinCAT, Structured Text, Ladder Logic, PLCs

CAD & Manufacturing: Fusion 360, Inventor, AutoCAD, Blender, DFM (Additive + Subtractive)

Programming: C/C++, Python, Verilog, Git

EDUCATION

British Columbia Institute of Technology

Burnaby, BC

Bachelor of Electrical Engineering, Average: 91%

2024 – 2029

- **Relevant Coursework:** Circuit Analysis, Digital Logic Design, Electronic Circuits, C Programming, Networking Fundamentals, Electrical Codes & Standards.
- Awarded **1st** at the BCIT Engineering Competition and **3rd** at the Western Engineering Competition (U. of Alberta), both in Debate.

EXPERIENCE

Robotics Co-op

Mission, BC

Silver Hills Bakery

Jan. 2026 – Present

- Designed, programmed, wired, plumbed, and commissioned a pick-and-place robotic cell to automate manual depanning of loaves onto a cooling tower, including state-machine control in Beckhoff TwinCAT (Structured Text & Ladder Logic) to integrate sensors, solenoids, valves, pneumatics, conveyors, motors, and air knives; achieved **150%** of target rate at over **4,000 loaves per hour**.
- Designed custom stainless steel/aluminum parts, frames, and end effectors to mount on **Kawasaki RS020N** robots for bread depanning, pan racking, and tray stacking.
- Diagnosed and reprogrammed several Kawasaki robots in live production using **K-IDE** and teach pendant programming, recovering faulted cells and minimizing line downtime.

Research Assistant: School of Energy

Vancouver, BC

British Columbia Institute of Technology

July 2025 – Dec. 2025

- Developed a questionnaire to classify co-op jobs from multiple program pathways at BCIT using Bohnenberger's taxonomy of sustainable employment.
- Coordinated a joint UBC-BCIT research survey, combining physical and digital outreach campaigns to engage hundreds of students across both campuses.

Apprentice Electrician

Port Coquitlam, BC

Mott Electric

Jan. 2024 – Mar. 2024

- Retrofitted a downtown Vancouver high-rise with fiber optic infrastructure, receptacles, and lighting systems.
- Diagnosed and resolved fiber optic and Ethernet cabling faults during installation.

LEADERSHIP & VOLUNTEERING

BCIT Student Association (BCITSA)

Burnaby, BC

Chair of Energy

June 2026 – Present

- Elected by School of Energy students to represent and advocate for them on the BCITSA Student Association Board.

BCIT Robotics Club

Burnaby, BC

President

June 2025 – May 2026

- Grew active membership by **285%** and doubled the size of the executive team since taking over as club president.
- Led **RC Classic 2026** with IEEE, **tripling competitor turnout** year-over-year and awarding **over \$2,400** in cash prizes via industry sponsorships.
- Hosted **Behind the Robot**, an alumni speaker series featuring **3** alumni working in robotics; secured **\$1,000** in funding for food and drew **55+** attendees from several programs across campus.
- Hosted **5 technical workshops** and **3 seasonal events**, and secured **2 new 3D printers** to expand the club's facilities.

PROJECTS

Robotic Dog - Planetary Gearbox | *Fusion 360, C++*

- Designed and 3D printed a backdrivable two stage 16:1 planetary gearbox.
- whiteboarded the inverse kinematics.

Jumper Wire Organizer Box | *Fusion 360, Inventor* | [MakerWorld](#)

- Designed a modular bento-style organizer to hold jumper wires; iterated custom snap-fit ribs and magnetic closures across dozens of FDM prototypes to dial in print tolerances.
- Published the design on MakerWorld, earning **over 2,100 collections** and **600+ downloads** in the first month.

SmartClock | *ESP32, C++*

- Built a WiFi-connected smart clock on an ESP32 with an OLED display and capacitive-touch interface.
- Integrated the OpenWeather and Alpha Vantage APIs for live weather and market data.

PrintMyCard | *React, TailwindCSS, Three.js, Python, OpenSCAD* | nwHacks 2026

- Developed a browser-based app for designing 3D-printable business cards via parametric modelling, with a React + TailwindCSS + Three.js frontend deployed on Vercel.
- Built a Python + OpenSCAD backend that algorithmically generates colour-aware 3MF files ready for direct printing.

INTERESTS & HOBBIES

Designing & 3D Printing: Constantly making little fixes, gadgets, and quality-of-life upgrades around the house.

Hiking & Outdoors: Exploring trails, getting lost, and stubbing my toe with my dog Ella.

Gaming: Slay the Spire, Dyson Sphere Program, Factorio, Dota 2, Rimworld.

Favourite AI Models: Claude Opus 4.6, Gemma 4 12B (local).

Reading: A few recent favourites: *Overshoot* by William Catton, *Notes from a Dead House* by Fyodor Dostoevsky, and *One Day, Everyone Will Have Always Been Against This* by Omar El Akkad.