

Alyssa Sanden - UBC Engineering Physics Student

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Academic & Professional Experience:

AI analytics and integration Internship

- Worked with Venture for Canada and Tammy Macdonald to create an app that automates the process of commercial and residential real estate using AI tools
- Worked on UI, frontend and backend development of web and mobile application.

Near Earth Asteroid Research at the University of Colorado Boulder

- Used high level research equipment to observe and record near earth asteroids.
- Coded software that turned the location of an asteroid into elliptical orbit, with correct error propagation.
- Was recognized by NASA for my contributions to the Minor Planet Centre

Regional Winner of the NASA Space Apps Hackathon

- Founded a team that created a web app to display the location of all near earth asteroids
- Won the Vancouver chapter and was globally nominated

Founder of Nationally Ranked Competitive Programming Club

- Founder of a team that was 31/1400 in the REPLY international coding competition and 1st in Canada.
- Built a game for the Ludum Dare Game Jam
- Was personally 19th in Alberta for competitive programming (Waterloo CCC)

Avionics Firmware/Software Team Member at UBC Rocket

- Working on the addition of GPS to the competition rocket, as well as integrating rocket simulation into code tests.
- Built my own L1 certification rocket, with successful launch (CAD design).

President of Holy Trinity Mathematics Club

- Ran 8+ competitive math contests for my high school (and personally achieved distinction in all 8)
- Hosted math themed events: pi day, irrational number day ect.
- 200+ hours of math tutoring (both volunteered and paid)

Technical Skills:

- Computer Science: C++, C, Python, Matlab, Power Apps, Power BI, Javascript, Github, GDscript, SQL, simulink.
- Engineering: Solidworks, machine shop experience, circuit design, design experience, research lab experience.
- Professional: Public speaking awards, leadership experience, determination, creativity.

Personal Projects:

- Neural network from scratch, and video about the process to create it
- Gingerbread model of the SpaceX rocket landing
- Duck tape, robot themed, prom dress for Stuck at Prom Competition
- The month that I ran nearly 10km a day (and raised \$435 for men's mental health)
- Ultramarathon, marathon and half marathons