Jack Beda

jack.beda.ca • 07749 845057 • jack@beda.ca • Edinburgh, UK

SUMMARY

I am a MPhys Mathematical Physics student at the University of Edinburgh (92% average) and a graduate of the International Baccalaureate (IB) program (43/45 points). I have completed three physics summer research projects, in both experimental and theoretical research. Additionally, I have worked very successfully planting trees in Northern Ontario. Finally, I studied Norwegian online over the pandemic, achieving C1 proficiency. I have now been learning Chinese for 3 years.

Key skills: Grit, communication, engagement, organization, Python, Mathematica.

EDUCATION

2021 – Present **University of Edinburgh (MPhys Mathematical Physics)**

- 92% average.
- Top grade of all first-year physics students (Brodie Prize), and top grade of third-year Mathematical Physics students (class medal).
- Three years of volunteer math tutoring a director of the Math Buddies program.

2022 – Present **Confucius Institute for Scotland (Evening Chinese Classes)**

- Taken 9 semester-long courses (Beginner 1-3, Elementary 1-3, Intermediate 1-2, Conversational Chinese) in Mandarin Chinese achieving a conversational speaking ability.

2020 – 2021 **University of North Dakota (Certificate in Norwegian)**

- Learned Norwegian from scratch to C1 certified over the pandemic.
- Completion of 5 semester-long Norwegian classes: GPA: 4.0 achieving a certificate in Norwegian.
- Achieved grade of A in the university of Oslo's level III Norwegian class, qualifying for education in Norway.

2017 – 2021 **IB Diploma and Honours High School Diploma at Kenner CVI**

- Received 43/45 points (top 7% worldwide) on the IB diploma.
- Received honours high school diploma with a final year average of 97%.

SUMMER RESEARCH EXPERIENCE

2024 **Internship: University of Edinburgh, Scotland**

- Mathematical physics project to explore the monodromy group of complex functions and their relationships to scattering amplitudes in particle physics.
- Honed my skills in complex analysis, computer science, abstract algebra, and developed extensive experience programming in Mathematica.

2023 **Internship: University of Tromsø, Norway**

- Designed, programmed, tested, and soldered a circuit board involving a Raspberry Pi Pico, digital to analogue converter, and numerous other components.
- Wrote and debugged numerous programs in C and Python. Gained extensive experience with oscilloscopes and programming.

2020 **Research Assistant: Trent University, Canada**

- Collecting and analyzed large quantities of spectrometer data to measure the birefringence of packing tape. Developed independent work and study skills.
- Wrote the article *Beautiful Birefringence* published by jIAPS, which presents the phenomenon under study to a lay audience.

OUTDOORING EXPERIENCE

- Present **Extensive Mountaineering and Backcountry Experience**

- Organized food, equipment, and route-planning for numerous backcountry canoe and mountaineering trips. I have singlehandedly run three week-long backcountry canoe trips in Algonquin. Demonstrating excellent organizational, communication, and planning abilities.
- Extensive experience winter mountaineering, roped climbing, skiing, boating, and night navigating. My mountaineering endeavors have taken me to the top of 87 of Scotland's 282 Munros (mountains over 3000ft).
- Completion of the 740 km Pictish Trail and 130 km Skye Trail.
- Full Canadian driver's licence. BASP wilderness first-aid certification (2023) following a two-day hands-on course. Canadian boating license (PCOC).

2021 **Tree Planter: Season with HRI in Northern Ontario**

- Two months living in a tent in freezing, rainy, and buggy weather without cell service, demonstrating my ability to do uncomfortable and challenging work for long periods of time.
- Largest day planted 4200 trees. Planted 50 000 trees total. Achieving the highest new-planter daily total for the camp at least 5 times. Clearly showing I can set and manage personal goals and exceed targets.