Sharavanan Kirupakaran

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Objective

To find a place of employment where I can not only grow as an engineer from a professional as well as a technical standpoint but contribute in meaningful ways to and help the company succeed in return.

Education

University of British Columbia | Bachelor of Applied Science | 2024

- Major in Biomedical Engineering
- 4.00/4.33 GPA (86%)
- Degree with Distinction (cumulative average of 80%+)

Stream: Cellular Bioengineering

- Focused on the engineering principles of design, analysis, and methodology in regards to cellular and molecular biology. Heavy focus on the development of cell-based therapeutics in regenerative medicine as well as drug delivery. Learned through a combination of various lectures, wet labs, and design projects in multiple areas of knowledge in regards to cellular bioengineering.

BMEG 250 - Cellular Physiology and Biophysics

- Learning about cellular structure and investigating fundamental mechanisms of membrane transport, signal transduction, muscle mechanochemistry and neurotransmission

BIOC 302 - General Biochemistry

- Learning about metabolism of lipids, amino acids and nucleotides. Also went over information on the process of information transfer and discuss how DNA is transcribed, processed and translated

BMEG 372 - Biomedical Materials and Drug Delivery

- Learned about the design and synthesis of drug delivery systems. Topics include: biomaterial types, the use of biomaterials, biological response, biocompatibility and degradation, nanocarriers, and in depth look at transdermal and oral delivery systems

BMEG 374 - Cellular Bioengineering: Laboratory & Design

- Course focused on genetic, molecular, and tissue engineering techniques. Underwent experiments and learned about tools related to cellular bioengineering techniques

BMEG 423 - Clinical Informatics

- Course centered on clinical information systems, decision support, and mobile health, as well as practical application of information engineering in regards to health care, including the management and use of patient health and well-being information

CHBE 481 - Bioprocess Engineering II

- Learned about the biological process of engineering in the fields of biotechnology and biomedical engineering. Topics include: enzymatic and cellular kinetics; cell culture, bioreactor mass transport and process development. Course included the design and operation of a biological product

Technical Skills & Awards

Programming Experience

- Microsoft Excel, C++, Python, Javascript and MATLAB
    - Used MATLAB extensively during my university labs to organize and present data taken during experiments/data provided by the instructors
    - Used C++, Python, Javascript in various university courses as well as at various hackathons (JAMHacks, Hack the North, etc.) to create different passion projects such as a website dedicated to planning the optimal study vs. sleep schedule before intensive mental activities (such as exams) as well as a simplistic video game revolving around platforming
- Award for best .TECH Domain Name at JAMHacks 2

Work Experience

Summer Internship | iVedha | 2018

- Learned how to code using python
- Learned about different cloud related software
- Learned about VR

Summer Work Placement | SQI Diagnostics | 2021-2022

- Hands-on experience with various lab techniques, lab maintenance, and lab etiquette
- Worked on COVID test kit research
- Organized data and analyzed data for patterns using excel and other software
- In charge of paperwork with regard to lab activity and maintenance

Extracurricular Activities/Projects

UBC Biomedical Engineering Student Team (BEST Engineering Design Team) |2022-2024

- Club dedicated to undertake medical medical based projects to provide students with practical biomedical engineering experience
- Professionally developed as an engineer in learning how to operate as part of a team as well as learn more about entrepreneurship in the biomedical engineering field

UBC New Venture Design | 2023-2024

- Worked in a group to create a functional prototype of a surgical tracker with the aim of allowing naked eye visibility to aid surgeons when performing operations
- Analyzed our project from an entrepreneurial lens looking at aspects such as financial projections, product support/repair, manufacturing, marketing etc.

Volunteer Work | Ontario Science Centre & Canadian Cancer Society | 2017-20204

- Ontario Science Centre: Organized and lead science lessons for young campers (aged 8-15)
- Ontario Science Centre: Tasked with handling customer relations in regards to parents
- Canadian Cancer Society: Co-founded the chapter at Upper Canada College
- Canadian Cancer Society: In charge of the budget and secretarial duties (managing meetings, scheduling meetings and events, contacting potential sponsors for collaborations etc.)

Captain of Upper Canada College Varsity Badminton | 2018-2020
Head of Upper Canada College's French and Chinese Culture clubs | 2018-2020

***Reference Available Upon Request**