Dipayan Dhar

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Education

Memorial University of Newfoundland St. John's, NL
Bachelor of Engineering (Co-op) September 2024 - Present

- 2nd Year Computer Engineering, Term 3 (Class of 2029)
- GPA: 4.00

Gonzaga High School St. John's, NL
High School Diploma September 2021 - June 2024

- Graduated grade 12 with Bronze Governor General's Academic Medal

Experience

MUN Faculty of Engineering and Applied Science St. John's, NL
Engineering Assistant (ONAE) May 2025 - August 2025

- Conducted an open water propeller experiment on an Office of Naval Research Tumblehome (ONRT) propeller, running trials on 58m long towing tank
- Developed a Python function using the nptdms library to extract raw trial data by averaging signal values over the test duration
- Implemented Regex with a file naming convention to batch-process 184 trials automatically, generating a structured spreadsheet of test cases and results, saving hours of manual processing

Gonzaga ROV/Robotics Team St. John's, NL
Head of Coding Sector January 2022 - June 2024

- Designed and programmed the control systems of several ROVs, interfacing an Arduino and Raspberry Pi using the Firmata protocol
- Developed pilot interface using a joystick and PyGame library, providing camera feed and sensor/motor information to the pilot
- Led the coding sector, ensuring effective communication and collaboration among all team members

Gonzaga Coding and Advanced Math Society St. John's, NL
Founder/Lead Instructor November 2023 - June 2024

- Founded the Coding and Advanced Math Society, aimed to teach students about coding and computer science that is beyond the basic school curriculum
- Conducted weekly sessions in the school computer lab, where students were allowed to learn and create coding projects.
- Taught a well-rounded Python course and introduced students to competitive programming, game development, and project management

Compusult Ltd. St. John's, NL
Product Developer/TechNL Intern July 2022 - August 2022

- Programmed and troubleshooted a servo-actuated robotic arm using ROS (Robot Operating System) and Python to control 6 D.O.F. using Gazebo
- Interfaced a Raspberry Pi with the robotic arm, providing communications with a Linux virtual machine
- Developed a detailed logbook of team meetings, events, and project updates, communicating with co-workers to meet deadlines and expectations

Relevant Projects

Personal Website/Portfolio St. John's, NL
Personal Project August 2025 - September 2025

- Built website structure with HTML, creating sections for About, Experience, Projects, and Contact, enabling smooth navigation via a navbar
- Used CSS Flexbox and Grid to create layouts for images, cards, and information sections
- Developed a responsive project carousel using Swiper, featuring individual cards with images and brief descriptions
- Implemented functionality with JavaScript, including interactive carousel controls and a dynamic project viewer that retrieves project details from a data object

Remote-Controlled Rescue Car St. John's, NL
Introduction to Programming Course January 2025 - April 2025

- Designed and built a remote-controlled rescue vehicle using an Arduino microcontroller, integrating multiple hardware components with Python
- Developed a simple algorithm for obstacle avoidance based on the input of an ultrasonic sensor to determine the best path
- Designed an intuitive user interface using PyGame for interactive movement controls and sensor feedback visualization

PLA Filament Recycling Project St. John's, NL
Graphics and Design Course September 2024 - December 2024

- Designed a hand-powered grinder and remoulding system to recycle scrap PLA from the MUN Student Design Hub
- Developed 3D models of grinder blades and enclosure using Onshape and 3D printed a prototype of the 7-blade assembly
- Hosted meetings with team and client to ensure project specifications
- Developed a detailed design report with background research, CAD drawings, and client recommendations

Skills and Training

- Python, Arduino, Raspberry Pi & Linux
- Onshape (3D CAD), Bambu Studio
- Microsoft Word, Excel, PowerPoint
- Strong leadership and project management, effective teamwork and communication
- Strong presentation and technical writing skills

Awards and Scholarships

Hebron Diversity Award	February 2025
Centenary of Responsible Government Scholarship	November 2024
PEGNL Past President's Scholarship	November 2024
Memorial University Entrance Scholarship	September 2024
YMCA Enterprise Olympics Attendee	May 2024
Hack Frost NL 4.0 First Place	February 2024
Research-Inspired Student Enrichment (RISE) Award	July 2023
Waterloo Fermat Math Competition 25% Distinction	June 2023
Hack Frost NL 3.0 Third Place	March 2023

Interests

- Badminton, chess, programming, robotics, video games, guitar