

Daryl Choo Chia Ler

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<https://github.com/darylchooo>

Motivated self-starter with strong foundation in Electrical Engineering and Computer Science at Columbia University, hands-on leadership experience at NASA and Shell, passionate about software engineering and the energy industry.

Education



Columbia University in the City of New York: BSc in Electrical Eng, Minor in Comp Sci (2021 – 2025)
University College London (UCL): Affiliate Electronics & Electrical Engineering (Jan 2024 – June 2024)

CGPA: 3.72 | Dean's List: Fall 2021, Spring 2022, Fall 2022, Spring 2023, Fall 2023

Relevant Courses: Fundamentals of Computer Systems, Data Structures, Object-Oriented Python/Java, Discrete Math, Probability for Engineers, Multivariable Calculus, Linear Algebra, Ordinary Differential Equations

Experience

- **Mission Director** **NASA** Sept 2022 – Jun 2024
 - Ranked among top 3 finalist teams at NASA Johnson Space Center Neutral Buoyancy Lab, for developing autonomous camera prototype for the NASA Micro-gravity Neutral Buoyancy Experiment Design Team
 - Implemented **You-Only-Look-Once (YOLO)** object detection algorithm to track astronauts in Orion capsule water landings for Artemis program, achieving 78% mean average precision by using **Ultralytics** & **OpenCV** <https://github.com/darylchooo/nasa-micro-g-next>
- **Technical Team Lead** **Engineers Without Borders** Dec 2022 – Dec 2023
 - Raised 40% of annual funds to build solar micro-grids serving 30 businesses, 2 schools & 1 medical center in Uganda, by creating & maintaining websites using **HTML**, **CSS** & **Javascript** <https://github.com/darylchooo/cuewb>
- **Project Engineer** **Shell plc** Jun 2024 – Aug 2024
 - Extended design life of 2 offshore gas hubs by 15 years, by creating & maintaining **MySQL** & **Power BI** databases identifying obsolete electrical equipment

Projects

- **Gastrointestinal Animated Pictograms (GAP)** **Science University of Malaysia** August 2024
 - Awarded \$1,300 from Rome Foundation for developing full-stack web application to survey gastrointestinal patients
 - Connected **HTML**, **CSS** & **Javascript** frontend to **Node.js** server using **Express.js**, integrating to perform CRUD operations on **MySQL** database, & deploying on **AWS** <https://github.com/darylchooo/gap>
- **Robotics Studio** **Columbia University** Sept 2023 – Dec 2023
 - Increased walking speed of quadrupedal robot, by applying **Proximal Policy Optimization (PPO)** algorithm to **Robot Operating System (ROS)** simulations in **Pybullet** <https://github.com/darylchooo/robotics-studio>

Awards

- Columbia Engineering Internship Fund 2023
- School of Engineering Dean Travel Fund 2023
- 2019 Shell Malaysia Scholarship Programme
- Duke of Edinburgh's International Award, Silver

Technical Skills

- Languages: Python, Java, HTML, CSS, Javascript, MATLAB, Arduino
- Frameworks: Node.js, Express, MySQL, Tensorflow, Pytorch, Ultralytics, OpenCV, Pybullet, Matplotlib, Seaborn
- Tools: AWS, Linux, Git/Github, Visual Studio Code, IntelliJ IDEA, YOLO, Power BI, ROS, JIRA, Confluence

Leadership

- Guidance, Navigation & Control (GNC) Engineer, NASA L'SPACE (Jan 2024 – Apr 2024)
- Finalist Team Captain, U.S. Dept of Energy Solar District Design Competition (Sept 2023 – Apr 2024)