



ANDREUS CARVALHO



EDUCATION

National University of Singapore

Aug 2023 – Dec 2026

Bachelor of Engineering (Computer Engineering)

- Second Major in Data Analytics
- NUS Overseas Colleges (Manila, AY23/24), premier global entrepreneurship program
- Curriculum Executive @ NUS Product Club – conducted technical workshops and product-focused sessions

Jurong Pioneer Junior College

Jan 2019– Dec 2020

Singapore-Cambridge General Certificate of Education Advanced Level

- Distinction in Higher Level Subjects: Physics, Chemistry, Mathematics
- Represented College in Singapore Chemistry & Physics Olympiad

INTERNSHIP & WORK EXPERIENCE

Information Technology Intern, Roche, Singapore

Jun 2025 – Dec 2025

- Automating workflows and dashboards using Python, SQL, Tableau, and AWS
- Supporting IT/OT troubleshooting, infrastructure issues, and end-user systems
- Assisting with cybersecurity (patching, monitoring) and system documentation
- Collaborating on cross-functional improvement and digitization projects

Product Engineer Intern, SmileAPI, Manila, Philippines

May 2024 – Aug 2024

- Internship under global **entrepreneurship** program, NUS Overseas Colleges
- Independently developed **full-stack** employment data verification web application using Singpass (National ID Database) APIs, Flutter, Firebase.
- Carried out stress-testing of Smile's existing API Product to improve **User Experience**.

Co-Founder & Tech Product Manager, Eduabler Pte Ltd, Singapore

Apr 2024 – Dec 2024

- Designed pre-MVP web app and developed it, bridging the gap between business vision and technical execution, which laid the groundwork for **early-stage product development**.
- Contributed to **funding applications**, demonstrating a strong understanding of **startup capital raising** and financial planning to support long-term growth.

Private Tutor, Mindflex Education Pte Ltd, Singapore

Aug 2024 – Dec 2025

- Taught 10th grade Math, Chemistry and Physics to **5 students**.
- Designed structured lesson plans and practice materials, helping all students to improve to at least a **distinction**

Operations Management Clerk, Singapore Army, Singapore

Mar 2021 – Dec 2022

- Completed two years of mandatory national service; promoted to **Corporal First Class** in recognition of outstanding performance and leadership
- Automated attendance and announcement systems with Microsoft VBA, **streamlining** daily operations

Software Engineering Intern, SBS Transit, Singapore

Dec 2020 – Dec 2020

- Built a **digital Permit-To-Work system** to replace the outdated hardcopy processes for site workers
- A Utilized Microsoft SharePoint to automate workflows, **reducing administrative friction**

KEY TECHNICAL PROJECTS

Veristrike (Digital Design FPGA Game)

[Github Repo](#)

Sep 2024 – Nov 2024

- Built a first-person shooter game integrating binary-to-decimal quiz progression using **Finite State Machines**.
- Developed **features** like health bars, lane-switching animations, and modular OLED graphics. See GitHub Repo for demo video.

BuffBuddy (Fitness Tracker)

[Github Repo](#)

Sep 2024 – Present

- Developed a robust CLI-based **fitness tracker** with features including but not limited to, creating, editing, and logging workout programs.
- Implemented **object-oriented structures** for tracking multiple workout days, exercises, and progress history.
- Integrated **JSON-based** data storage for seamless persistence and retrieval of user data.
- Ensured **reliability** through comprehensive input validation, error handling, and Junit testing.

mBot Maze-Solving Robot Project

[Github Repo](#)

Sep 2023 – Nov 2023

- Designed and implemented an **autonomous maze-solving robot** using custom-built sensor circuits and advanced algorithms.
- Developed and optimized a maze-solving algorithm **with K-Nearest Neighbors (KNN)** for color detection.
- Enhanced the robot's wall-tracking system using a **Proportional-Derivative (PD)** controller for precise navigation.
- Contributed to the **design and integration** of infrared proximity and color detection sensors.

SKILL SETS & PROFICIENCY

- **Proficient:** Python, C++, Java, API Integration, Git, Firebase, Low-Code Automation
- **Intermediate:** JavaScript, Verilog, Digital & Circuit Design, Product Thinking
- **Beginner:** AWS, Video Editing, Figma

LANGUAGE PROFICIENCY

- **Spoken:** English – Proficient; Hindi - Proficient
- **Written:** English – Proficient; Hindi - Proficient