Hector Carrillo

he.carrillo.e@gmail.com | +52 1 5568058775 | hecarrillo.github.io/Portfolio

EDUCATION

INSTITUTO POLITÉCNICO NACIONAL
B.A.Sc in Computer Engineering
Jan 2021 - Dec 2024 | Mexico City
Computer Science College (ESCOM)

UNIVERSITY OF BRITISH COLUMBIA
B.Sc. Computer Science
Sep 2018 - Dec 2019 | Vancouver, BC

UNIVERSIDAD PANAMERICANA HIGH SCHOOL
Grad. May 2018| Mexico City, Mexico
Physics and Mathematics Emphasis

LINKS

AC2O Website

RELEVANT COURSEWORK

Principles of Software Construction (OOP, UBC)
Introduction to Microcomputers (UBC)
Linear Algebra (UBC)
Calculus I, II and III (UBC)
Introduction to Machine Learning (Ongoing, Stanford via Coursera)

SKILLS

TECHNICAL
Experienced or worked with:
Java (2 yrs / Academic Use) • Python (1 yr, Project Application/ETL processes/ Data handling) • GraphQL(Project Application) • Javascript (Node.js env, 1.5 yrs, Professional Use) • AWS (1.5 yrs, Professional Use)• Git (2 yrs) • MySQL(Professional Use)• C++ (0.5 yr Competitive Programming Use)
Familiar:
LaTeX• React.js (Project Application) • MATLAB (Focused on Machine Learning / On-ramp certificate) • HTML & CSS

SOFT SKILLS
Problem Solving (HackerRank Intermediate badge) • Creative Solutions • Fast-paced learner

LANGUAGES
Spanish (Native)
English (C1, 108 TOEFL Score)
German (Beginner)

PROFESSIONAL EXPERIENCE

KONFIO | SWE Intern
March 2020 – August 2020 | Miguel Hidalgo, Mexico
- Implemented and optimized web scrapers using JavaScript (Node.js environment) deployed to AWS for the data mining division.
- Upgraded the internal API resulting in 95% uptime, a 30% improvement over the older process. Achieved by creating backup mechanisms such as circuit breakers and refactoring web scrapers, as well as implementing Redis caching.

FREELANCE | Junior Backend Developer
January 2021 – May 2021
- Implemented initial back end cloud infraestructure for a startup building a web app for competitive shooting. Worked mainly to provide authentication, payments, communications and database CRUD operations endpoints via REST APIs using Node.js.
- Designed, deployed and maintained a NoSQL Database using DynamoDB (AWS) with GraphQL endpoints. It has been tested with 100+ people in the beta phase of the project providing reliable and secure access (using Cognito authentication).

CONTENT-OH! | SWE Intern
May 2021 – Present
- Implementing and designing back end cloud infraestructure to manage user and product data for vendors in a new web app. The platform allows them to manage their products and sell in more than 100 digital retailers seamlessly. Currently available for public use with more than 300 active users.
- Designed and maintaining a MySQL DB, constructed from various non-normalized data sources. This was done through ETL processes and data analysis using Python. Achieved a 50% data size reduction by normalization and redundancy elimination while keeping data integrity.

ACTIVITIES | PROJECTS

ATMOSPHERIC CLOUD CHAMBER OF THE OKANAGAN (AC2O) |
Software and Electronics Lead
Dec 2018 – Sep 2019 | Kelowna, BC | ▶ | 📖
Responsible for developing a control and telemetry system on board of a physics experiment using a RaspberryPi and Python to handle the automation and sensor data retrieval. Launched to the stratosphere in partnership with the Canadian Space Agency and CNES France.

HEAT ROBOTICS | Vice President and Founder
Jan 2019 - May 2019 | Kelowna, BC
Founder of the first software and robotics team of UBC Okanagan campus. Responsible for recieving more than 4000 CAD in funding to operate the team and helping 15+ students fund their trip to the UBC Vancouver Hackathon. This club was the precursor of the current Computer Science Union Club on the same campus.

AWARDS

- 2019 Canadian Stratospheric Balloon Experiment Design Challenge Winner Project - Canadian Space Agency, Centre National d'études Spatiales & SEDS Canada
- 2018 Outstanding International Student Award - University of British Columbia
- 2018 National Robotics Champions - FIRST Robotics Competition
- 2017 Zhang Heng Award for Engineering Design, 3rd Place - FIRST Global Competition