Punar Vasu Gupta

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EXPERIENCE

Software Developer
Popin Inc. | May 2022 - present

- Developed the core features of an events app being used by UofA students.
- Full-stack web development using: Next.js, Tailwind CSS, Firebase, CI/CD using Vercel.

Student Researcher
University of Alberta | May 2022 - present

- Measuring the motions of stars in young clusters using Gaia satellite data to characterize the turbulence in interstellar gas around them.
- Writing tools in python to perform theoretical and mathematical computations on 3D vector fields.

Software Developer Intern
Beta Healthcare International Ltd | May 2021 - July 2021

- Created and deployed a (Google Forms like) web application to handle form submissions and approvals.
- Used the MERN stack (MongoDB, Express, React, Node.js).
- Deployed application on local company servers.

Software Team Member
AlbertaSat | October 2019 - January 2021

- Developed MCU software for the Ex-Alta 2 satellite.
- Developed drivers implementing serial communication protocols such as i2c, SPI, UART.
- Collaborating with the software team on GitHub (Created and handled PRs).
- Represented AlbertaSat at various events including; Engineering Open House event and "Let's Talk Space".

Electrical Team Member
UAlberta Space Design Group | March 2020 - August 2021

- Canadian Reduced Gravity Experiment Design Challenge (CAN-RGX), SEDS Canada.
- Project: Determining Response Differences to Microgravity in Male and Female Bioengineered Cartilage Tissue.
- Assisted in designing an electrical system for the project, created electrical schematics, and presented progress reports to SEDS, CSA, and NRC representatives.

AWARDS & CERTIFICATIONS

- Machine Learning. Stanford Online, Coursera | June 2019
- President's Award Scheme, Gold Award. Awarded by his excellency Uhuru Kenyatta (President of Kenya) | July 2016
- Acoustic Guitar, Grade 8. University of West London | Feb 2016
- Faculty of Engineering Academic Excellence Scholarship | Sept 2017
- University of Alberta International Country Scholarship | Sept 2017
- International Student Scholarship | Sept 2017

EDUCATION

BSc Double Major in Computer Science and Physics
University of Alberta | Sept 2017 - Apr 2022

- Relevant CS coursework: Intelligent Systems (AI), Computer Organization & Architecture, Algorithms I, Introduction to Software Engineering, Operating System Concepts, Computer Systems & Microprocessor Architecture, Numerical Methods, Machine Learning.

PROJECTS

Client-Server Architecutre Implementation
Operating systems programming

- An implementation of a single-threaded server and client application.
- Programmed in C using the linux socket API.

ML model comparison
Machine Learning | CMPUT 466 Coursework

- Final project for CMPUT 466 (Machine Learning) at the University of Alberta. Comparing the performance of three different ML models on a credit card fraud detection task.

KrowdTrialz
Android Application | CMPUT 301 Coursework

- Final project for CMPUT 301 (Intro to Software Engineering) at the University of Alberta. An Android application for publishing and contributing data to statistics experiments.

TECHNICAL SKILLS

C/C++ Java Python JavaScript TypeScript Next.js React Node.js Git Android Development Embedded Software Linux MongoDB Firebase SQL Express