Shreeya Pradhan

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EDUCATION

University of Idaho (College of Engineering**)** **Expected Graduation**: May 2025
Major: Bachelor of Science | **Computer Science** **Minor:** Bachelor of Science | **Mathematics**

SKILLS

Programming: C/C++, Fortran, Bash Scripting, C#, Python, JavaScript, YACC, Lex, HTML, CSS
Tools: Linux, Unix, Git, XAMPP, Unity, FLASK, PhpMyAdmin, Putty, Arduino Uno, GNURadio

EXPERIENCE

Software Developer, Intern | May 2024 – November 2024 | Idaho National Laboratory, ID

- Gained in-depth knowledge of facility's application software by studying extensive documentation and analyzing legacy code written in Fortran from the late 1900s to early 2000s.
- Led the migration of legacy Fortran code to modern .f95 files using Pro*C pre-compiler, ensuring functionality remained consistent throughout the process.
- Created and managed a dedicated directory in the company's system for code development, testing, and validation in the absence of GitHub for version control.
- Conducted rigorous testing and verification to confirm the migrated code matched the original functionality, maintaining software reliability and performance.
- Collaborated closely with team members through regular code reviews to refine solutions and enhance code quality.
- Implemented a structured progress-tracking system to document development milestones, enhancing transparency and facilitating effective communication with team members.

Math Tutor, Polya Math Centre | August 2021 – Present | University of Idaho, Moscow

- Offering expert guidance to mathematics students in Algebra, Pre-Calculus, and Calculus.

Director of Broadcasting, ESPN+| August 2022 – Present | University of Idaho, Moscow

- Live-streaming sports coverage for ESPN+ within the Department of Athletics, managing events such as basketball, football, volleyball, and soccer.

SOFTWARE ENGINEERING PROJECTS

Antenna Array for Incoming Signal Angle Detection using Radio and Phase Measurement (**Senior Capstone Design**):

- Designed and implemented firmware for a radio-based antenna array system utilizing GNURadio, KrakenSDR, and Raspberry Pi to capture and process raw I/Q data.
- Developed signal processing logic using the MUSIC algorithm for high-resolution Direction of Arrival (DoA) estimation, achieving precise angle detection(about three percent error).
- Conducted testing and validation to ensure system accuracy, robustness, and reliability in diverse environmental conditions.

Corsair Clash and Caveman (2D Game Development on Unity for **Software Engineering** Course**):**

- Organized team-oriented version control for a semester-long Unity project(Team of 6 people)
- Utilized GitHub for version control and documentation to ensure project organization and efficiency

Website Development for **Database Systems** Course (**My HOME**):

- Engineered a dynamic website using Python, Flask, JavaScript, and HTML(Team of 2 people)
- Integrated a MySQL database and SQL queries via phpMyAdmin to manage and retrieve data

Embedded Systems Firmware Development for **Embedded System** Course (Digital Lock System):

- Pin Code Lock using Arduino Uno, Vanduino Shield, 4x4 keypad and 16x2 LCD.

LEADERSHIP EXPERIENCE

- Cooperative Program Participant at University of Idaho [Summer 2024 - Fall 2024]
- International Student Ambassador (IPO) and Active Member of Society of Women Engineers (SWE)
- College of Engineering Mentorship Program at University of Idaho [January 2023/24/25 – May 2023/24/25]