Rupin Raj Kumar Pradeep
Buffalo, NY
rrupinr@gmail.com
(518) 902 9838

Education

University at Buffalo, The State University of New York, Buffalo, NY *Computer Engineering BS* Expected May 2024

Relevant Courses: Real Time Embedded Systems, Computer Organization, Electronic Devices and Circuits, Systems Programming, Data Structures, Linear Algebra, Microprocessors, Computer Architecture

Distinctions: University Honor Society, University Dean's List, National Honor Society, National Society of Collegiate Scholars

GPA: 3.95 / 4.0

Skills

Programming: C/C++, C#, Java, SystemVerilog, MIPS assembly, ARM assembly, Scala

Software: IntelliJ, mBed, Unity, Unreal, NetBeans, Autodesk Fusion 360, Multisim, GitHub, QtSpim

Hardware: Breadboarding; circuit design; soldering; and use of oscilloscope, multimeter, and function generator.

Projects

Autonomous Limited Pathfinding Vehicle, University at Buffalo Dec. 16, 2022

- Programmed an embedded system in C++ that drives a vehicle around obstacles.
- Configured peripherals with bitwise configuration (LCD display, matrix keypad, IR sensor, and motors).
- Implemented hardware interrupts, a watchdog timer, a scheduling mechanism, and race protection.
- Tested and debugged the BFS algorithm which created the updating path.
- Presented the final product through documentation, a slideshow presentation, and a demonstration.

Unreal Engine Open World RPG, University at Buffalo Dec. 9, 2022

- Developed a complete RPG game in a team of 4 over 2 months.
- Improved the game by collecting user feedback and making appropriate edits.
- Applied CPM scheduling to organize and schedule work deadlines efficiently among group members.
- Downloadable version of the game: https://bitly.ws/zwfe.

Traffic Light System, University at Buffalo May. 6, 2022

- Devised state patterns and used Boolean simplification to design a digital traffic light system.
- Prototyped and tested solutions with SystemVerilog.
- Breadboarded the final solution for demonstration with gates and flip-flops.

Experience

University at Buffalo Teaching Assistant Jan. 30, 2023 – Present
University at Buffalo, Buffalo, NY

CSE 341 Computer Organization

- Teach relevant material including MIPS assembly in two 1-hour labs every week for 50 students.
- Grade student coursework and conduct office hours on a weekly basis.

CSE 241 Digital Systems

- Teach relevant hardware including IC basics, state patterns, and SystemVerilog during a 2-hour lab every week.
- Grade student coursework and conduct office hours on a weekly basis.