Ranjan Behl

US Citizen

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EDUCATION

Purdue University **West Lafayette, IN**

Bachelor of Science in Computer Engineering GPA: 3.46/4.0 *Expected Graduation: May 2022*

- Graduate Coursework: Computer Vision for Embedded Systems, Compilers and Translator Writing Systems.
- Undergraduate Coursework: Data Structures and Algorithms, Computer Security, Embedded Systems, Operating Systems.

EXPERIENCE

Union Pacific **Omaha, NE**

Software Engineer Intern *May 2021 - January 2022*

- Worked on developing a prototype application to showcase that train crossings can be remotely tracked, leading to an overall more efficient process of knowing when a crossing is being blocked. Specifically worked on creating the backend of the application and implemented multiple APIs using Spring Boot and XML Schema
- Designed and implemented the backend data storage as an oracle coherence cache
- Conducted thorough testing of the backend using jUnit5, Mockito and PIT testing to achieve 80 percent test coverage

AFRL-UAS **West Lafayette, IN**

Student Researcher *August 2020 - Present*

- Investigating how to safely intercept and track a ground target with a robust, cyber-secure, unmanned aerial system (UAS)
- Specifically, working on computer vision algorithms using opencv and trajectory planning to better improve object detection, classification and tracking

Microprocessor Systems and Interfacing **West Lafayette, IN**

Teaching Assistant *August 2020 - May 2021*

- Provided guidance and insight to students in lab sections, held weekly office hours, proctored exams, and graded assignments
- Taught students micro-controller instruction set and assembly language programming techniques, bus timing analysis, general-purpose I/O, buffered I/O handling, interrupt handling, ATD, SPI, SCI, and embedded system design considerations

PROJECTS

Nutri-Vision *Nov 2021 - Dec 2021*

- An embedded application that is able to use a given image of a fruit or vegetable and display nutritional information for it.
- Built using Resnet18 + Pytorch, trained using fruit-262 dataset and Edamam API for nutrition information on a Pi 4.

WIFICoin *Jan 2020 - Jan 2020*

- A WiFi "hotspot" sharing web and mobile application based on the concept of purchasing/earning and then redeeming WiFi coins to gain access to nearby WiFi
- Built using Android studios, PHP, MySQL, and google maps API
- Build for the BoilerMakeVII Hackathon

LANGUAGES AND TECHNOLOGIES

- Programming Languages: Java, C++, C, Python, JavaScript, PHP, Assembly(ARM and x86)
- Frameworks: Spring, Angular, Junit, Mockito, Jasmine
- Libraries: OpenCV, NumPy, Pandas, PyTorch, React
- Databases: Oracle, MySQL, PostgreSQL, MongoDB
- Technologies: Git, Jenkins, Docker, Jira, AWS, ROS, Gazebo

ADDITIONAL

- Leadership: Webmaster for Purdue Society of Professional Engineers
- Awards: Dean's List(Fall '18, Spring '20)
- Foreign Language: Fluent in Hindi