

Pranav Rihal

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EDUCATION

Carnegie Mellon University

Masters in Software Engineering - Scalable Systems

Pittsburgh PA

Aug. 2024 – Dec 2025

National Institute of Technology, Karnataka

Bachelor of Technology in Electronics and Communication Engineering

Surathkal, Mangaluru

Aug. 2018 – May 2022

EXPERIENCE

Software Engineer I

o9 Solutions

July 2022 – July 2024

Bangalore, India

- Developed an enhanced Platform Health Check View using the Kendo-UI library, reducing the time taken for DevOps to identify 'blockers' in the platform by over 15%.
- Implemented an end-to-end Platform Resilience project using JavaScript, HTML, CSS, and .NET Core, facilitating real-time monitoring of ongoing actions by querying MongoDB and transmitting data to the UI via REST APIs.
- Prototyped Generative AI for the o9 Platform using Flask, React, MongoDB, and a Seq2Seq transformer model, resulting in a chat-based prototype capable of generating reports from user input.
- Enhanced User Experience as one of the founding members in the Accessibility team by incorporating various ways of navigation, such as keyboard and screen readers, throughout the platform.

Backend Developer Intern

ShippingKaro Private Limited

March 2021 – May 2021

Bangalore, India

- Communicated with product team and architects potential solutions for client problems.
- Created a User Login Page along with a dashboard view for clients to track their orders using CodeIgniter, an MVC framework, on the backend and React on the frontend.
- Made use of PHP-based controller to establish a connection with the company's MYSQL database to save the data of over 100+ clients on the ShippingKaro Platform.
- Hosted the project using the XAMPP server, which helped us deploy the solution in our local environments, reducing overhead costs by over \$600(50,000 INR) monthly.

PROJECTS

Hotel Booking Web Application | MERN, Passport.js, OAuth, REST MVC

Dec 2023 – March 2024

- Architected a scalable hotel booking web application leveraging Node.js and Express.js, enhancing system performance and user experience.
- Implemented advanced user authentication and authorization using Passport.js with JWT and OAuth strategies, ensuring secure and seamless user sessions.
- Integrated Cloudinary for cloud-based image storage and retrieval, optimizing media management with asynchronous processing and caching strategies using Redis.
- Developed responsive and dynamic front-end views using EJS templates and AJAX for real-time updates, improving client-side performance and interactivity.
- Employed Mocha and Chai for unit and integration testing, ensuring robust and error-free application performance.

Intrusion Detection System | Python, Neural Networks, Pandas

Aug 2021 – March 2022

- Developed an Intrusion detection system to ensure accurate detection of network attacks.
- Visualized the KDD-99 dataset using the Seaborn and Pandas library and performed data pre-processing techniques such as Batch Normalization and One hot encoding.
- Published plugin to websites gaining 2K+ downloads and an average 4.5/5-star review.
- Due to a variance in frequencies of the classes in the dataset, balancing the classes was also considered, namely, oversampling the dataset using SMOTE.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, C#

Frameworks: React, Flask, Spring Boot, .NET Core, Kendo-UI, JQuery, Jasmine, JUnit, Mocha

Developer Tools: Git, MongoDB, Docker, VS Code, Visual Studio, PyCharm, IntelliJ

Libraries: Pandas, NumPy, Matplotlib, Seaborn, Underscorejs, Requirejs