

Pranav Rihal

prihal@andrew.cmu.edu | [linkedin.com/pranav-rihal/](https://www.linkedin.com/in/pranav-rihal/) | github.com/pranavr753

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 .NET Razor platform health dashboard with real-time metric correlation, reducing DevOps tickets by 15%.
- Recognized as 'Performer of the Month' for integrating Redis and SignalR into the Platform Resilience project, boosting alert efficiency, shortening response times, and attracting clients generating \$750,000 annually.
- Prototyped a chat-based AI for o9's Hackathon with the help of a Seq-2-Seq transformer model and Flask, reducing report creation/generation time by 30%.
- Contributed as a founding member of the Accessibility team by improving platform navigation with keyboard and screen readers, increasing compliance up to WCAG-AA and benefiting 1,000+ determined clients.

Backend Developer Intern

ShippingKaro Private Limited

March 2021 – May 2021

Bangalore, India

- Collaborated on system and backend design enhancements, optimizing client solutions and potentially saving them \$20,000 annually in operational costs.
- Created a User Login Page along with a dashboard view for clients to track their orders using CodeIgniter and React.
- Made use of PHP-based controller to establish a connection with the company's MYSQL database to save the data of over 1500+ 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 \$6000(INR 500,000) 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 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