

Pranav Rihal

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EDUCATION

Carnegie Mellon University

Masters in Software Engineering - Scalable Systems

Pittsburgh PA

Aug 2024 – Present

National Institute of Technology, Karnataka

Bachelor of Technology in Electronics and Communication Engineering

Surathkal, Mangaluru

Aug 2018 – May 2022

SKILLS

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

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

Tools and Technologies: Git, MongoDB, Kubernetes, Redis, Docker, Jenkins, Linux, Shell Scripting, IntelliJ

EXPERIENCE

Software Engineer I

o9 Solutions

Bangalore, India

Jul 2022 – Jul 2024

- Developed health check dashboards with ASP.NET Razor Pages, utilizing real-time metrics via REST APIs and leveraging Kubernetes for container orchestration.
- Earned 'Performer of the Month' for incorporating Redis and SignalR into 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 by implementing a Seq-2-Seq transformer model and Flask, decreasing report generation time by 30%.
- Led an Accessibility team to enhance platform navigation with keyboard and screen readers, achieving WCAG-AA compliance for over 1,000 clients, and integrated automated testing with Jenkins.

Backend Developer Intern

ShippingKaro Private Limited

Gurgaon, India

Mar 2021 – May 2021

- Collaborated with cross-functional teams, including product managers and front-end developers, to enhance system and backend design, optimizing solutions and saving clients \$20,000 annually in operational costs.
- Created a User Login Page along with a dashboard view with 10+ customizable widgets for clients to track orders using CodeIgniter and React.
- Leveraged PHP-based controller to establish a connection with ShippingKaro's MySQL database to save data of over 1500+ clients on ShippingKaro's Platform.
- Directed the deployment strategy on the XAMPP server and optimized the process using shell scripting, facilitating local environment setup and reducing overhead costs by \$6,000 monthly.

PERSONAL PROJECTS

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

- Architected a scalable hotel booking web application using Node.js and Express.js by implementing a microservice architecture and leveraging Docker for containerized deployment.
- Implemented advanced user authentication and authorization by Passport.js with OAuth strategies, ensuring secure and seamless user sessions.
- Integrated Cloudinary for cloud-based image storage with asynchronous processing, reducing image load times by 2.5 to 3 seconds, and ensured UNIX system deployment compatibility.
- Constructed responsive and dynamic front-end views with EJS templates and AJAX for real-time updates, enhancing client-side performance and interactivity.
- Employed Mocha for unit testing and integrated CI/CD pipelines, decreasing regression bugs by 25%.

Intrusion Detection System | *Python, Neural Networks, Pandas*

- Developed an Intrusion detection system to ensure accurate detection of network attacks.
- Visualized KDD-99 dataset with Seaborn and Pandas libraries, and applied 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 classes in the dataset, balancing these were also considered by oversampling the dataset using SMOTE.