Milinda Karunaratne

Full Stack Web Developer — BSc Engineering

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📍 Kegalle, Sri Lanka   in LinkedIn   ⓞ GitHub

Profile Summary

Results-driven **Full Stack Web Developer** with expertise in designing and deploying scalable, high-performance web applications. Proficient in **JavaScript, React, Node.js, and database management**, with a strong focus on clean code, responsive design, and seamless user experiences. Experienced in Agile methodologies, RESTful APIs, and modern development tools. Passionate about leveraging emerging technologies to deliver innovative solutions and drive digital transformation.

Core Competencies

Programming Languages:	JavaScript (ES6+), TypeScript, Python, Java, HTML5, CSS3
Frontend Development:	React, Angular, Next.js, Tailwind CSS, Bootstrap, Redux
Backend Development:	Node.js, Express, Spring Boot, RESTful APIs, GraphQL
Databases:	MySQL, PostgreSQL, MongoDB, Firebase
DevOps & Tools:	Git, Docker, Webpack, Vite, Postman, Jest, CI/CD Pipelines
Other Skills:	Authentication (JWT, OAuth), Responsive Design, Performance Optimization, Agile Development

Professional Experience

Software Engineer Intern   *Sep 2024 – Present*
IJSE, Sri Lanka

- Developed dynamic, responsive web applications using **React, Node.js, and Express**, ensuring seamless user experiences.
- Designed and implemented **RESTful APIs** for efficient data exchange and integration with third-party services.
- Optimized database performance using **PostgreSQL** and **MongoDB**, reducing query times by 30%.
- Collaborated in an **Agile** environment, utilizing **Git** for version control and code reviews.
- Conducted debugging and performance optimization, improving application load times by 25%.

Intern   *Jan 2023 – Jul 2023*
OREL Corporation Pvt Ltd, Sri Lanka

- Conducted quality inspections to identify and resolve defects in painted switches, improving product reliability.
- Assisted in ensuring compliance with quality standards for cable insulation materials.
- Analyzed and optimized production processes, enhancing product consistency and reducing waste.

Projects

1. Talkmate — AI Chatbot   (ⓞ GitHub)   *Sep 2024 – Present*

- Developed a real-time AI-powered chatbot using **HTML, CSS, and JavaScript**.
- Integrated **Firebase Authentication** for secure user login and session management.
- Designed a fully responsive and interactive UI, improving user engagement by 40%.

2. Secure Banking Web App   (ⓞ GitHub)   *Feb 2025 – Mar 2025*

- Built a full-stack banking application using **React** (frontend) and **Node.js with Express** (backend).
- Implemented secure authentication using **JWT and OAuth**, ensuring robust user account protection.
- Integrated **MySQL** for efficient data management and transaction handling.
- Developed a **role-based access control (RBAC)** system to manage user permissions securely.

3. SkyDesk — Remote Desktop Application   (⍟ [GitHub](#))   *Dec 2024 – Feb 2025*

- Engineered a remote desktop application with real-time screen sharing, file transfer, and video calling.
- Implemented efficient **socket communication** for seamless data exchange between clients and servers.
- Optimized UI/UX using **JavaFX**, resulting in a 30% improvement in user satisfaction.

4. Machine Learning-Based Pb Replacement for Perovskite Solar Cells   (⍟ [GitHub](#))
Aug 2023 – Jul 2024

- Developed a web-based predictive analytics tool using **Flask** and **React** for real-time material analysis.
- Trained machine learning models (**Random Forest, SVM, Gradient Boosting**) to predict bandgap values with over 78% accuracy.
- Designed a user-friendly dashboard for scientists to analyze results and visualize predictions.

5. Horizon-Nexus Browser and Web Server Development   (⍟ [GitHub](#)) *Jan 2025 – Feb 2025*

- Developed a custom web browser using **JavaFX** with a built-in web server to handle HTTP requests.
- Implemented a **URL parser** and **HTTP response handler** for efficient request processing.
- Designed an intuitive UI to improve navigation and usability.
- **Related Repository:** [Horizon-Browser](#)

Education

BSc (Hons) Engineering   *Jan 2020 – Jul 2024*
University of Moratuwa, Sri Lanka

- Second Class Upper Division (GPA: 3.33)
- Specialized in **Material Engineering** with foundational knowledge in **Python, machine learning, and software development**.
- Developed academic projects incorporating problem-solving and basic programming techniques.

Extra-Curricular Activities

- Active **Volunteer** at LEO Club, University of Moratuwa – Organized social service initiatives and leadership programs.
- Served as a **Junior Prefect** at Kegalu Vidyalaya, demonstrating leadership and discipline.
- Conducted **free educational seminars** for school children to promote STEM education.
- **Member** of the University Buddhist Society, engaging in cultural and community activities.
- Represented Kegalu Vidyalaya in **Cricket, Basketball, and Athletics**, fostering teamwork and sportsmanship.