Sharanya Golikoppa Sathyanarayana

Full Stack Engineer

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WORK EXPERIENCE

02/2024 – Present
Stuttgart, DE

Working student- Full Stack Developer, *DÜRR DENTAL SE*

- Designed and implemented an interactive employee card game for the company's internal directory, leveraging to enhance user engagement; adopted responsive design principles to ensure cross-device compatibility for 250+ active users.
- Implemented Backend-for-Frontend (BFF) patterns with Node.js, optimizing service integrations and API performance for 30+ production screens.
- Built dynamic inventory management boards with server-driven filtering, multi-branch data aggregation, and URL parameter-based state management, enabling instantaneous view switching and real-time updates without full page reloads.
- Architected a monitoring platform for factory-wide displays, using React.js for the frontend, Node.js for the backend, and live WebSocket data streams to render continuously updating production and performance metrics.
- Worked in an Agile team, managing tasks via Kanban and sprints, with version control in Git. Applied CI/CD, basic DevOps, and server-side Git repository management, including Docker containerization and lightweight scripting to automate configurations and ensure smooth deployments.

Technologies used: JavaScript, React.js, Node.js, Power BI, HTML, CSS3, Tailwind, PL/SQL, PHP, Git, IFS ERP, Novacura, Figma

07/2023 – 11/2023
Stuttgart, DE

RESEARCH ASSISTANT, *UNIVERSITÄT STUTTGART*

- Developed a webpage Additive Wiki, MediaWiki-based knowledge platform to centralize additive manufacturing data. Implemented a responsive front end using HTML, CSS, and JavaScript, configured backend settings with PHP, and managed databases with MySQL. Hosted the system using FileZilla Client (FTP).
- Developed a web interface for a 3D laser cutting machine. Designed a secure, web interface on a Odroid system, to control a 3D laser printer with integrated live camera feeds. Developed user authentication and machine controls from C++ UDP commands, using Flask (Python) to establish a backend server for command routing, and HTML, CSS, and JavaScript for the frontend.

Technologies used: MediaWiki, PHP, HTML, CSS, Python (Flask), Linux, FileZilla (FTP)

EDUCATION

10/2022 – 09/2025
Stuttgart, DE

Masters in Science (M.Sc) "Information Technology", *UNIVERSITÄT STUTTGART*
Final Grade: **2.3**
Relevant Coursework: Information Visualization Lab, Data Warehousing, Data Mining and OLAP, Machine Learning, IT service Management

08/2018 – 07/2022
Bangalore, IN

Bachelors in Engineering, *RNS INSTITUTE OF TECHNOLOGY*
Major in Electronics and Instrumentation; Cumulative GPA: **8.9/10**
Relevant Coursework: Java, Python, Neural networks, Embedded systems, ARM Microcontroller

PROJECTS

Development of a Feedback Loop to Improve Computation Offloading Decision-Making in Distributed Cloud/Edge Networks (Master's Thesis)

- Designed a real-time, reinforcement learning-based offloading system that optimizes task delegation to edge or cloud infrastructure using live network metrics.
- Implemented an adaptive feedback loop to continuously refine decision-making and improve performance under dynamic conditions.
- Configured real-time monitoring and logging to track key performance metrics and support system optimization.

Tech Stack: Python, Reinforcement Learning, Pandas, Matplotlib, Torch, Bash, Ubuntu, Jupyter Notebook

Fullstack Web Application Development with MERN Stack

- Developed a single-page application using the MERN stack, featuring dynamic user authentication, data management, and secure access control.
- Implemented a structured user and content management system, enabling users to create, view, edit, and delete location-based posts with image uploads.
- Deployed the application using modern hosting strategies, with the frontend on Firebase Hosting and the backend REST API on Heroku for scalability and reliability.

Tech Stack: React.js, Node.js, Express.js, MongoDB, Firebase, JavaScript, HTML, CSS

Exploratory Data Visualization of New York Housing Market

- Conducted a detailed analysis of New York housing market data sourced from Kaggle, working with 5,000+ rows and 17 columns to exploring property investment potential through insightful visualizations.
- Pre-processed raw data in Python to clean and structure it, ensuring accurate representation of variables such as price and location.
- Designed and implemented four distinct visualizations using svelte.js- stacked bar charts, bar charts, geospatial maps, and tree maps, effectively illustrating trends and relationships in housing data.

Tech Stack: Svelte.js, Python, Jupyter Notebook, SQLite, Matplotlib, Seaborn, Plotly, Pandas, GeoPandas

AI Planning Approaches for Enhancing Intelligent Building Systems (Seminar Paper)

- Conducted a systematic literature review of 20+ research papers on Al-driven planning techniques for intelligent buildings, focusing on IoT integration, automation, and real-time decision-making.
- Analyzed temporal planning, multi-agent systems, and hierarchical task networks to address key challenges such as fault tolerance, scalability, and energy optimization.
- Evaluated Al frameworks for enhancing occupant comfort, adaptive energy management, and autonomous building operations.

LANGUAGES

English
C1

German
A2