MANASA YEGAMATI

Dartford, England, UK | (+44) 7747268106 | manasayegamati7989@gmail.com | linkedin.com/in/yegamatimanasa/

PROFILE

A dedicated and highly proficient Software Engineer with over 2 years of hands-on experience, currently pursuing an MS in Computer Science with Industrial Placement at the University of East London. Thrive on turning complex problems into efficient, scalable, and user-focused solutions. Proficient in building responsive web applications using ReactJS and NextJS with strong expertise in backend technologies including REST APIs, GraphQL, and WebSockets. Skilled in C++, Python, Java, and SQL, alongside experience in database management with MongoDB and MySQL. Adept at designing and deploying cloud-based architectures on AWS and GCP, optimizing system performance, and reducing server costs. Proven ability in delivering innovative, high-performance solutions that drive measurable results for forward-thinking organizations value.

SKILLS

Programming Languages: C, C++, Python, Java, SQL, JavaScript, TypeScript, PHP
Web Development: HTML, CSS, AngularJS, ReactJS, NextJS, Flask, Bootstrap, Tailwind CSS
Backend: Node.js, REST APIs, GraphQL, WebSockets
Data Science & Machine Learning: Convolutional Neural Networks, TensorFlow, Keras, Scikit-learn, Pandas, NumPy, StandardScaler, Matplotlib, Seaborn.
Cloud Platforms: Google Cloud Platform (GCP), Amazon Web Services (AWS)
Database Management: MySQL, MongoDB
Developer Tools: Visual Studio Code, Eclipse, Anaconda, PyCharm, Jupyter Notebook, GitHub, Gerrit, Google Colab, MATLAB, Urban Code Deployment (UCD), Jenkins, Postman, Trello, Kanban, Confluence, Jira, Sublime Text, Figma, Latex, Splunk, SonarQube
Testing & Security Tools: Static Application Security Testing (SAST), Dynamic Application Security Testing (DAST), Zed Attack Proxy (ZAP), Non-Visual Desktop Access (NVDA), Color Contrast Analyzer (CCA), Axe Dev Tools

EDUCATION

University of East London (UEL) | United Kingdom   **September 2023 – May 2025**
Master of Science in Computer Science with Industrial Placement   Percentage: 82%
Coursework: Advanced Software Engineering, Machine Learning, Cloud Computing, Big Data, Dissertation

University College of Engineering and Technology for Women (UCETW) | India   **June 2017 – July 2021**
Bachelor of Technology in Computer Science and Engineering   Percentage: 85%

WORK EXPERIENCE

Graduate Teaching Assistant | University of East London   **January 2025 – Present**
- Supervised technical lab sessions by bridging theoretical concepts with practical applications, promoting 60+ students' attention, and deepening comprehension of complex technical topics.
- Streamlined instructional materials and lab curricula, simplifying technical content to boost engagement by 20%.
- Evaluated student projects and examinations maintaining 100% integrity in grading and feedback processes.
- Collaborated with 10+ faculty members to introduce innovative teaching strategies and resolve challenges in lab activities, cultivating a progressive and interactive educational environment.

Research Assistant | University of East London   **September 2024 – Present**
- Curated and secured over 7,000 data points across AI and Cloud domains, validating data accuracy, confidentiality, and reliability for research analysis.
- Transformed Python to analyze preliminary datasets, extracting actionable insights that informed early-stage research and validated key hypotheses, contributing to a 15% acceleration in research progress.
- Monitored and led project meetings while maintaining schedules, fostering team collaboration and securing 100% alignment with project timelines, resulting in timely delivery of key milestones.
- Authored 7 manuscript outlines and 5 progress summaries, effectively communicating research updates to stakeholders and preparing for future publications.

Software Engineer | Tata Consultancy Services | India   **July 2021 - September 2023**

- Created responsive banking applications using ReactJS, enhancing user experience and achieving a 25% increase in mobile user engagement, earning client recognition for delivering an intuitive interface.
- Troubleshot and resolved production issues through systematic debugging, mitigating incident response time by 30% and advancing application stability.
- Designed reusable components with advanced validation mechanisms, accelerating workflows and streamlining feature implementation time by 20%.
- Automated regulatory processes by creating a web application and scripts, eliminating manual effort by 40% and improving operational productivity, which received client accolades for simplifying compliance tasks.
- Migrated version control from Gerrit to GitHub, strengthening code review efficiency and fostering collaboration, resulting in a 15% faster code deployment process.
- Validated application functionality through rigorous manual and functional testing, guaranteeing 98% accuracy in deliverables and exceeding client expectations for quality.
- Expanded testing team capabilities by performing desktop and mobile testing, drafting test cases, and upholding accessibility compliance (CCA, NVDA), increasing test coverage by 35%.
- Facilitated knowledge-sharing sessions for new team members, elevating team productivity by 15% and fueling a culture of mutual support.

PROJECTS

Real-Time Geo Crop AI Recommendation Framework | *Machine Learning, Flask, Python, Geospatial Data Analysis*
- Developed a Decision Tree Classifier obtaining 92% accuracy, leveraging soil composition and environmental data to provide location-specific crop recommendations, refining suitability crop analysis precision by 15%.
- Built a Flask-based GeoAPI for real-time geospatial analysis, utilizing user coordinates to fetch soil and climatic data, and optimizing fetch time by 25% using GeoPy for precise crop suggestions.
- Implemented a responsive web interface allowing users to input geographic coordinates and access tailored crop recommendations, boosting user interaction by 40%.

Real-Time Collaborative Whiteboard | *NextJS, Tailwind CSS, GraphQL, WebSockets, MongoDB*
- Engineered a collaborative whiteboard using NextJS, Fabric.js, and WebSockets, enabling real-time drawing, shape tools, and image uploads, expanding user engagement by 60%.
- Enhanced real-time collaboration with Socket.io, reaching sub-50ms latency, while leveraging GraphQL (Apollo Server) and MongoDB for 35% faster data retrieval and persistent storage.
- Architected a scalable solution, integrating REST APIs, GraphQL, and NoSQL databases, executing efficient state management and seamless multi-user interaction in a high-performance web application.

Real-Time Weather Tracker App | *ReactJS, Chart.js, REST APIs, UI Design*
- Crafted a real-time weather-tracking web application using ReactJS, enabling users to access current weather conditions for any location through a public API.
- Seamlessly integrated OpenWeatherMap APIs to fetch and refresh weather data every 30 minutes, checking users receive up-to-date information without requiring page reloads.
- Visualized historical weather trends using Chart.js, presenting temperature and precipitation data over the past five days to help users analyze weather patterns while ensuring a mobile-first, responsive UI for seamless performance across all devices.

PUBLICATION AND CERTIFICATION

- "AI-GeoInfo Crop Recommendation Framework Using Decision Tree Classifier and Flask-based GeoAPIs" accepted for publication in Applied and Computational Engineering (ACE) at the 3rd International Conference on Mechatronics and Smart Systems (CONF-MSS 2025).
- AWS Academy Cloud Foundation Certificate – Issued by AWS Academy.