SAI SRITEJ PALACHARLA

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Summary

Enthusiastic and dedicated Computer Science graduate with 2.5+ years of hands-on academic and internship experience in full-stack development, DevOps, and AI research. Proficient in Java, Python, JavaScript, and tools like Git, Jenkins, Docker, and MongoDB. Contributed to real-world projects involving Retrieval-Augmented Generation (RAG) and LLM analysis and Strong foundation in CI/CD, testing, and scalable system design. Eager to apply my skills, adapt quickly, and contribute with passion, hard work, and continuous learning in an entry-level Software Developer or DevOps role.

Skills

- **Programming:** Python, Java, C++; basic Bash and R.
- **Web Development:** HTML, CSS, JavaScript, Node.js, REST APIs.
- **DevOps:** Git, Jenkins (CI/CD), Docker, Linux.
- **Testing:** Selenium, JUnit, Cypress.
- **Cloud Databases:** Azure (basic), MySQL, MongoDB.
- **Data ML:** NumPy, pandas, scikit-learn, TensorFlow (basic).

Research Publications

- **Heart Disease Detection Research** **Jan 2022 – Aug 2022**
  Koneru Lakshmaiah University *Vijayawada, India*
  - Worked on a team research paper to predict heart disease using Python and machine learning models (Random Forest, Naive Bayes).
  - Published the results in an academic journal. View Paper

Professional Experience

- **Research Assistant** **Sep 2023 – May 2025**
  University of Massachusetts, Lowell *Lowell, MA*
  - **Scope:** Assisted in two research projects—one focused on creating a new functional programming language, and the other on using AI models to support student learning in non-technical fields.
  - **Work:** Collaborated with Prof. Paul Downen on designing a functional language using logical rules. Worked with Prof. George Joseph to develop RAG-based tools and explained how AI models like ChatGPT and DeepSeek work to students in accounting.
  - **Results:** Contributed to better AI learning tools for non-CS students. Helped compare the performance of ChatGPT, DeepSeek, and Grok AI, and improved clarity in how these models are taught and understood.

- **Arete IT Services Pvt Ltd** **Nov 2022 – Mar 2023**
  Web Development Intern *Vijayawada, India*
  - **Scope:** Designed and developed Broflix, a Netflix-inspired movie streaming website to showcase movie cards, categories, and basic UI features using core web technologies.
  - **Work:** Built responsive UI using HTML, CSS, and JavaScript with interactive elements like hover effects, sliders, and a dynamic homepage layout. Practiced version control with Git and deployed the project using GitHub Pages.
  - **Results:** Strengthened understanding of frontend design principles, CSS positioning, and DOM manipulation. Successfully completed and deployed a working prototype that demonstrated real-world project development skills.

- **Java Full Stack Intern** **Jan 2022 – Jun 2022**
  Elite Technology *Guntur, India*
  - **Scope:** Developed a full-stack recipe-sharing website from scratch using HTML, CSS, JavaScript for frontend and MongoDB for backend to enable users to browse, share, and manage recipes.

* **Work:** Implemented responsive UI with dynamic recipe cards, user authentication, and CRUD operations. Utilized Node.js for backend logic and database interactions, and practiced Git for version control. Successfully deployed the site.
* **Results:** Gained hands-on experience in full-stack web development, improving backend performance by 30% and enhancing user interaction through responsive design.

Peer Mentor – Software Engineering **Jan 2021 – Dec 2021**
KL University *Vijayawada, India*

- **Scope:** Supported the delivery of the Software Engineering course by designing lab content and mentoring students in practical concepts like testing and modular coding.
- **Work:** Created lab manuals, self-guided tutorials, and video blogs on Git, TDD, and debugging. Assisted professors in project evaluations and automated grading workflows using Python and shell scripting.
- **Results:** Enabled 100+ students to gain real-world development experience. Enhanced own technical skills in DevOps-style pipelines, software documentation, and collaborative tooling.

Projects

- **Finding Effects of Drugs on COVID Outcome using Causal Inference Method**:
  * **Scope:** Investigated the impact of various drug treatments on COVID-19 patient recovery using causal inference, aiming to uncover actionable insights for personalized treatment strategies.
  * **Work:** Implemented custom algorithms for Logistic Regression, Naive Bayes, Neural Networks, XGBoost, and Gradient Boost without standard ML libraries. Conducted detailed data preprocessing, feature selection, and treatment effect analysis.
  * **Results:** Identified significant differences in drug effectiveness across patient groups, demonstrating that non-library causal models can reveal nuanced insights. Findings support evidence-based therapeutic planning for COVID-19 treatment.
- **Human Activity Recognition Using RaspBerry Pi**:
  * **Scope:** Developed an intelligent monitoring system for elderly care that detects physical activities and identifies falls in real time, using low-cost edge devices and cloud-based alerting.
  * **Work:** Utilized OpenCV and MediaPipe on Raspberry Pi to recognize activities and detect abnormal motion patterns. Integrated AWS services to trigger alerts upon fall detection, enabling real-time notifications to caregivers.
  * **Results:** Successfully deployed the system with accurate real-time detection and minimal latency. Improved reliability of elderly monitoring systems and demonstrated the potential for scalable low-cost health IoT solutions.
- **Lights Out – Horror-Themed PC Game using C++ and Unity**:
  * **Scope:** Designed and developed an immersive horror-themed PC game focused on puzzle-solving and suspense mechanics, aimed at enhancing player engagement through story-driven level progression.
  * **Work:** Engineered core gameplay logic in C++ and scripted dynamic interactions using Unity's component-based architecture. Implemented event-driven programming for trigger-based effects and optimized rendering pipelines for smooth performance.
  * **Results:** Received highly positive user feedback during test cycles, with a 30% increase in level completion rates. Demonstrated strong software engineering skills in game loop management, scene transitions, and UI/UX flow design.

Certifications

* **AZ-400: Designing and Implementing Microsoft DevOps Solutions**
* **IBM Data Science Professional Certificate – Coursera**
* **AWS Cloud Practitioner Essentials - Coursera**
* **Software Development Lifecycle Specialization -Coursera**

Education

- **University of Massachusetts, Lowell**
  Master's in Computer Science (GPA: 4.0/4.0) *Lowell, MA*
- **Koneru Lakshmaiah University**
  B.Tech in Computer Science (GPA: 9.8/10.0) *Guntur, India*