




# PAVAN VISHNU SAI BESTHA

Full-Stack Developer | AWS Certified | MERN | DevOps | CI/CD | Docker | Cloud-Native Systems

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## Education

- **The University of Florida, Gainesville, FL** Aug 2023 - Dec 2024  
Masters in Computer Science  
**Coursework:** Advanced Data Structures, Software Engineering, Data Science, Mathematics intelligent systems, Security and marginalization, AI-Avatars, UI-UX Design, Bioinformatics, Distributed Operating Systems Principles, Machine Learning, Entrepreneurship, Human-Computer Interaction, Computer Networks, Intro to Cryptology.

## Skills

- **Technologies:** SQL, NoSQL, PostgreSQL, MongoDB, UI/UX Tools, REST APIs, ML Libraries, Postman, Bootstrap, CI/CD, JWT
- **Cloud(AWS):** EC2, S3, RDS, Lambda, Redshift, IAM, CloudFront, Elastic Beanstalk
- **Programming Languages:** Python, C, Java, HTML, CSS, JavaScript, TypeScript, JSON
- **Frameworks:** React.js, React Native, Express.js, Node.js, Django, jQuery, Angular.js, Spring Boot
- **Developer Tools:** Git, GitHub, Figma, Blender, Canva, Balsamiq, Miro, Docker

## Work Experience

### Cinema Verde – Full-Stack Developer

Aug 2024 – Present

- Re-architected the NGO's digital platform to React + Node on AWS (EC2, S3, RDS, Lambda, CloudFront, IAM), cutting page-load time 35% and boosting visitor retention 30% while sustaining 99.9% uptime.
- Optimized data layer: refactored PostgreSQL schema, added MongoDB for high-speed content queries, and moved media from MySQL BLOBs to S3, reducing storage cost 28%.
- Integrated AWS MediaConvert to Amazon Prime Video for 400+ videos, expanding global audience 40%.
- Built 12 interactive dashboards (Power BI, Tableau) and exposed insights via secure REST APIs consumed by React front-end.
- Stood up CI/CD with GitHub Actions, Docker, and Elastic Beanstalk: shifted releases from weekly to daily with under 2% rollbacks.
- Hardened security: HTTPS, CSP, JWT, RBAC, AWS WAF; automated S3/Lambda backups, cutting critical vulnerabilities 40%.
- Authored Functional Requirements Specification (FRS) and created unit/integration/acceptance test suites (Jest, Cypress, Postman), slashing post-release defects 50%.
- Mentored 5 engineers on React, TypeScript, Git, and UX (Figma, Bootstrap, Balsamiq), raising sprint velocity 25% and shrinking design-to-dev hand-off 20%; ran NIST-aligned cyber-awareness sessions achieving 100% policy compliance.

(**Core technologies:** React.js, Node.js, Express.js, TypeScript, JavaScript, HTML, CSS, Bootstrap, SQL, PostgreSQL, MongoDB, AWS EC2/S3/RDS/Lambda/CloudFront/IAM/Elastic Beanstalk/MediaConvert, REST APIs, Docker, Git/GitHub, CI/CD, Power BI, Tableau, Figma, UX/UI, JWT, RBAC, WAF, DevSecOps, Agile, Mentorship.)

### I Ray IT Solutions – Software Engineer

Jan 2022 – Dec 2022

- Collaborated with two Senior Software Engineers to deliver a Spring Boot REST API in Java 11 that ingested 50k traffic sensor events per day (peaks 2k/min) with average latency under 200 ms.
- Designed and built a responsive admin dashboard using React.js, TypeScript, HTML5/CSS3, Bootstrap, and Figma wire-frames, reducing incident triage clicks from 8 to 5 and shortening operator task time 15% (usability tests, n = 6).
- Architected a two-tier data pipeline: hot data persisted in PostgreSQL for instant look-ups; cold archives streamed to AWS S3, cutting monthly storage spend about 20%.
- Dockerized micro-services and scripted on-demand EC2 environments for weekend load tests, keeping costs within a student budget.
- Integrated AWS CloudWatch logging and SNS email alerts, slashing issue-detection from hours to under 5 minutes.
- Practised Git-flow on GitHub, authored JUnit unit tests, and participated in peer reviews: foundation for my current DevOps / CI/CD mindset.

(**Core technologies:** Java 11, Spring Boot, REST API, React.js, TypeScript, HTML/CSS, Bootstrap, PostgreSQL, AWS EC2/S3/SNS/CloudWatch, Docker, Git/GitHub, JUnit, Figma, DevOps.)

### Department of Mechanical MUJ – Frontend Developer

Aug 2021 - Dec 2021

- Designed an 8-semester course planning tool using Figma, Balsamiq, and Miro, improving user satisfaction by 30% and integrating accessibility features per WCAG standards.
- Conducted research, storyboarding, and feedback analysis from 50+ users, creating prototypes with error alerts and drag-and-drop functionality, leading to a design approved for the university website.

### Bits Pilani Hyderabad Campus – ML Researcher

Jan 2021 - Jul 2021

- Conducted height estimation research using Arduino, enhancing accuracy by 15% and cutting processing time by 20%.
- Trained machine learning models on collected datasets, improving prediction accuracy by 25%.
- Utilised OpenCV for face detection, optimizing algorithms to enhance real-time performance by 20% and improve reliability.

## Projects

### Gator.ai GitHub

- GatorAI is a MERN-based AI chatbot (React, MongoDB, Express.js, Node.js) inspired by ChatGPT. It securely stores user data in encrypted form on MongoDB, utilizes RESTful APIs, and employs JWT tokens, HTTP-only cookies, and signed cookies for robust authentication. Its modular architecture allows message creation, retrieval, and deletion with ease.

## Research Paper & Certifications

### AWS (Amazon Web Services) Certified Developer – Associate [verify](#)

- Earned expertise in developing, deploying, and debugging cloud-based applications using AWS services.

### International Conference on Computer Science and Artificial Intelligence (ICCSAI-22) [GitHub](#) [View Here Pdf](#)

- Benchmarked facial-recognition models on the ORL dataset, identifying Linear Discriminant Analysis (LDA) as the top performer
- Achieving **97% accuracy in 0.34 s** with an OpenCV implementation setting a new internal standard.