Raghavendra Chitroju

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SUMMARY

Full-Stack & ETL Developer with 5 years of experience building scalable web applications and data integration pipelines across enterprise and research settings. Proficient in Java Spring Boot, React.js, Node.js, and RESTful API development. Experienced in ETL tools like Informatica and ODI, with hands-on implementation of OFSAA modules (Profitability, ALM, LRM, FTP) and OBIEE/OTBI reporting. Skilled in Docker, CI/CD, and cloud platforms including AWS and Oracle Cloud (OCI). Seeking full-time roles in full-stack development, backend engineering, or data-driven software engineering.

EDUCATION

Wright State University, GPA- 3.77/4.0   Fairborn, OH
Master of Science in Computer Science   *Jan 2023 – May 2025*

VIT University, GPA- 3.62/4.0   Vellore, India
Bachelor of Technology in Electrical and Electronics Engineering   *Jul 2017 – June 2021*

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, TypeScript, Python, C#, C++, PHP, SQL, NoSQL, HTML5, CSS3
Backend Frameworks: Spring Boot, Spring MVC, Spring Security, Node.js, Express.js, Django, Flask
Frontend Technologies: React.js, Next.js, Angular, Vue.js, HTML5, CSS3, Sass, Bootstrap, Tailwind CSS, Material-UI
Databases & Storage: PostgreSQL, MySQL, MongoDB, Oracle DB, Redis, Elasticsearch
Cloud & DevOps: AWS (EC2, S3, Lambda, RDS, Auto Scaling), Oracle Cloud (OCI), Docker, Kubernetes, Jenkins, CI/CD
Tools & Technologies: Git, GitHub, GitLab, Maven, Gradle, Postman, Swagger, REST APIs, GraphQL, JWT, OAuth2, WebSockets, gRPC
System Design & Infrastructure: Load Balancing (NGINX, HAProxy), Forward/Reverse Proxy, CDN, API Gateway, Horizontal/Vertical Scaling
Messaging & Streaming: Kafka, RabbitMQ, Pub/Sub Model, JSON, XML
Networking & Protocols: TCP/IP, UDP, HTTP/1.1, HTTP/2, HTTP/3
Security: TLS/SSL, OAuth2, XSS/SQL Injection Prevention, CSRF Protection, DDoS Mitigation
Monitoring & Observability: ELK Stack, Splunk, Prometheus, Grafana, Jaeger, OpenTelemetry
Testing & Quality: JUnit, Mockito, Jest, Cypress, Selenium, SonarQube
Certifications: Oracle SQL Certified Associate, OCI Generative AI Certified Professional (2024)
Relevant Courses: Design and Analysis of Algorithms, Database Systems, Web Development, Software Engineering, Computer Networks

EXPERIENCE

Wright State University   Fairborn, OH
Graduate Research Assistant – AI/ML and Full-Stack Engineer   *Aug 2023 – May 2025*

- Led applied research in **computer vision**, specializing in object detection using **RGB-IR aerial imagery** with models like **DETR**, **YOLOv7**, and **DiffusionDet**; achieved 66.86% mAP and published results at **ISQED 2025**.
- Utilized **PyTorch Lightning** and **TensorBoard** to build and evaluate transformer-based object detection pipelines, with distributed training on Linux clusters.
- Designed and hosted model-serving dashboards using **Spring Boot**, **Spring Security**, and **React.js**; integrated performance logging and version comparisons.
- Deployed full-stack app on **EC2** with Dockerized backend/frontend; monitored logs and metrics with shell-based scripts and basic **Prometheus** setup.
- Developed and tested REST APIs for inference, annotation, and metrics collection using **Postman**, **JUnit**, and **Mockito**.

- Worked with **LLMs** such as **GPT-4V**, **LLaMA**, and **BLIP** to auto-generate captions and enhance multimodal annotations.
- Maintained Git-based CI workflows and ensured research reproducibility through documentation, **Javadoc**, and structured reports.

Oracle India Pvt. Ltd.   Bengaluru, India
Associate Consultant – ETL Developer & Java Full-Stack Engineer   *Jan 2021 – Dec 2022*

- Implemented and configured **OFSAA** modules including **Profitability**, **LRM**, **ALM**, and **FTP** for top-tier financial clients.
- Designed data ingestion and transformation logic using **Informatica**, **Oracle PL/SQL**, and OFSAA Data Foundation extracts.

- Developed Spring Boot REST APIs for data exchange, secured with **JWT**, and integrated with OFSAA staging layers.
- Built React.js-based dashboards for ETL status monitoring, scenario modeling, and rule validations; enabled backend interactions through secure REST endpoints.
- Leveraged **AWS EC2, S3, and Parameter Store** for application hosting, data storage, and configuration; built Jenkins CI/CD pipelines and used **Docker** to streamline deployment.
- Created OBIEE dashboards and transitioned key reports to **OTBI** for better performance and real-time analysis.
- Collaborated with SMEs to fine-tune allocation logic and troubleshoot model validations for financial risk frameworks.
- Automated alerts and reconciliation tasks using **Shell scripts**, **Oracle Scheduler**, and SQL-driven reports.

Meghaz Inc.   Chennai, India
Full-Stack Java Developer   *Jan 2020 – Dec 2020*
- Worked with a **legacy Java EE** architecture, supporting financial workflows across the enterprise.
- Enhanced user session control and transaction management using **JSP**, **Servlets**, and **Spring MVC**.
- Built secure endpoints with **Spring Security**; designed UIs with **Thymeleaf**, **HTML/CSS**, and AJAX.
- Interfaced with **MySQL** using **Hibernate ORM** and JDBC; ensured ACID compliance across modules.
- Packaged and deployed WAR files using **Maven** on **JBoss EAP**; explored internal cloud-like VM environments for hosted testing.
- Used **iText** and **Apache POI** for generating transaction and user reports; tracked tickets via **Jira**.
- Contributed to Agile team ceremonies, sprints, and retrospectives, enabling continuous delivery of legacy upgrades.

PUBLICATIONS

Efficient Object Detection from Fused RGB and IR Aerial Images Enhanced by Token Selection   2025
Raghavendra Chitroju, Tanvi Banerjee, Wen Zhang   *ISQED 2025*

PROJECTS

Ride Sharing App | *Spring Boot, React.js, MongoDB, JWT, Leaflet.js*   *Apr 2025 – Present*
- Built a full-stack ride-sharing application using **Java Spring Boot** for backend APIs and **React.js** for the frontend interface.
- Implemented JWT-based authentication, role-based access (driver/rider), and CORS-secured frontend-backend communication.
- Integrated **MongoDB** to store users, ride history, and geolocation data, supporting efficient NoSQL queries.
- Enabled map-based location selection using **Leaflet.js** and real-time route matching logic based on spatial proximity.
- Developed modular services for chat, fare calculation, and ride tracking. Backend is Dockerized and ready for cloud deployment.
- Currently integrating **nearest rider-matching algorithms**, using spatial indexing and real-time geolocation updates to pair customers with nearby drivers—similar to techniques used in **Uber** and other ride-hailing platforms.

Finance Tracker | *React.js, Node.js, MongoDB, OpenAI API, Docker, SonarCloud*   *Jan 2025 – Apr 2025*
github.com/narayanacharyuluchitroju/finance-tracker
- Designed a sleek full-stack web app to simplify personal expense tracking with modern UI and smart automation features.
- Implemented secure authentication with JWT, and enabled expense CRUD operations with category-wise visualizations.
- Integrated **OCR** capability using **OpenAI API** to auto-extract details from uploaded or captured receipts.
- Built REST APIs using **Node.js** + **Express**, used **MongoDB** + **Mongoose** for persistent storage.
- Containerized the application using **Docker**, integrated CI/CD pipelines with **GitHub Actions** and **SonarCloud**.
- Frontend styled with **Tailwind CSS**, API communication via **Axios**, and file upload via **Multer**.

French to English Seq2Seq Translation with Attention | *Python, TensorFlow, GloVe, NLP*   *Aug 2023 – Dec 2023*
github.com/narayanacharyuluchitroju/seq2seq_LSTM_Model_with_and_without_attention
- Implemented two deep learning models (Seq2Seq with LSTM and with Attention) for French-to-English translation tasks.
- Used **TensorFlow/Keras** to build encoder-decoder architectures with pre-trained **GloVe** embeddings (200d).
- Handled dataset preprocessing, tokenization, and alignment using `eng_french.csv` with reproducible training steps.
- Configured Jupyter Notebooks for demonstration and debugging, with clear modular sections and instructions via `requirements.txt`.