

CHANDAN MONABOLU NARAYANA

Athens, GA, US

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Summary

Software Engineer with 2+ years of experience, specializing in backend development, decentralized systems, distributed systems, and blockchain technology. Demonstrated expertise in designing scalable microservices, optimizing API performances, and integrating secure data storage solutions. Proficient in solving complex problems and driving innovation through automation and efficient system architectures.

Education

The University of Georgia, Athens, GA

Master of Science in Computer Science

August 2023 – May 2025

GPA: 3.86/4

REVA University, Bangalore, India

Bachelor of Technology in Electronics and Communication Engineering

August 2017 – June 2021

CGPA: 8.67/10

Professional Experience

The University of Georgia

Software Developer Research Assistant

July 2024 – Present

Athens, GA

- Collaborated with Intel to develop a Decentralized Zero-Trust IoT Data Infrastructure, integrating security with scalable solutions for IoT applications, which enhanced system security and scalability.
- Engineered Web3DB, a microservices Web3 based decentralized and distributed database using Interplanetary File System (IPFS) as a storage system, improving data accessibility and integrity.
- Standardized asynchronous task management through consolidation of RabbitMQ and Celery in Web3DB, leading to improvement in system response times and enhanced overall system efficiency and scalability.
- Embedded MQTT and REST API for real-time IOT communication, enabling efficient data publishing and retrieval.
- Expanded research scope to integrate Ethereum-based blockchain technology, leveraging Solidity for smart contract development and Web3.js for secure data storage and controlled access.

TATA Consultancy Services

Software Engineer (Full-time)

June 2021 – June 2023

Bangalore, India

- Initiated and established an automated operations platform with role-based access, real-time issue tracking, and automated reporting, saving 840+ hours annually and improving issue reporting accuracy by 25% for testing engineers.
- Programmed and optimized a Flask-based RESTful API backend with SQLAlchemy, improving query execution efficiency and reducing API response time by 15%, allowing the system to handle 20% more concurrent user requests.
- Architected and maintained a relational database schema using MySQL and MariaDB, optimizing query performance through indexing, connection pooling, and query caching, leading to improved data retrieval speeds by 60% and reduced latency.
- Streamlined cloud deployment by automating CI/CD pipelines using Jenkins and Docker, reducing API deployment time by 30% while ensuring high availability and scalability in production.
- Led the automation of testing frameworks using PyTest and Selenium, reducing manual testing time by 40% and accelerating release cycles.
- Engaged with stakeholders to identify and prioritize feature enhancements, driving a 15% increase in product functionality and user satisfaction based on feedback from executives and managers.

Skills

Programming Languages: Python, Rust, C/C++, SQL, HTML, CSS, JavaScript, Go/Golang, Java, TypeScript

Web & Backend Development: Flask, Django, RESTful API, SQLAlchemy, Numpy, Pandas, FastAPI, API design, Celery

Frontend Development: ReactJs, VueJs, AngularJs

Databases: MySQL, PostgreSQL, CockroachDB, MongoDB, NoSQL, MariaDB, Redis, DynamoDB

DevOps & Cloud: Docker, Kubernetes, AWS, GCP, Azure, Jenkins

Testing & Quality Assurance: Pytest, UnitTest, Selenium, Postman

Messaging & Stream Processing: RabbitMQ, Apache Kafka, Apache Flink, Celery

Development Tools & IDEs: Jira, Postman, Linux, GitHub, GitLab, Bitbucket, Swagger/OpenAPI, PyCharm, Jupyter Notebook, Visual Studio

Software Development & Methodology: Agile, SCRUM, CI/CD, Microservices, MVC, Automated Testing

Selected Projects

[ckks-engine](#): **Homomorphic Encryption in Rust for Secure Computations**

- Built a Rust crate implementing the CKKS homomorphic encryption scheme for privacy-preserving computations.
- Implemented encrypted arithmetic and string operations to process sensitive data securely.

AWS Pipeline for Dimensional Modeling and Analytics

- Constructed a data pipeline to extract raw data into S3, process the data using AWS Glue Crawler, and create a relational model for querying in AWS Athena, enabling faster analytics.
- Transformed raw data into a dimensional model using Python and loaded over 500,000 records into Amazon Redshift, optimizing query performance for analytics.

Cinema E-Booking System

- Developed a React.js & Python-based platform for movie browsing, seat selection, and ticket booking.
- Integrated real-time seat availability, a responsive UI, and deployed the system on AWS for demo purposes and showcasing scalability.