Nanda Gopal Yadav Pattapagalu

218-349-2319 | patta215@d.umn.edu | linkedin.com/in/NandaGopal | github.com/NandaGopal

Education

University Of Minnesota Duluth   Duluth, MN
Bachelor of Science in Computer Science - GPA 3.5*/4   *Aug 2022 – May 2025*

Technical Skills

Languages: Java, C++, Python, JavaScript, Dart, SQL
Developer Tools and Technologies/Frameworks: WebSockets (Socket.io), Git, Apache Kafka, MongoDB, MySQL, DynamoDB, CI/CD Automation, Express.js, Docker, Pandas, Plotly, JUnit, LaTeX, Flask, React.js, Node.js
Cloud and DevOps: AWS (EC2, S3, RDS, Lambda, API Gateway, EventBridge, Glue, Athena, IAM, Cognito, CloudFormation, CodePipeline)

Projects

DS Universe - Cloud-Based Dataset Repository | *AWS, Flask, Node.js*   **January 2025**
- Designed and deployed a scalable web platform for dataset contribution and access, similar to GitHub but for datasets, using AWS EC2, S3, RDS (MySQL), IAM, and Route 53 to ensure high availability, security, and fault tolerance with an elastic load balancer
- Optimized database performance and automated infrastructure management, improving query efficiency through indexing and query tuning while leveraging AWS Cloud Shell for infrastructure automation and streamlined cloud resource provisioning

NoteTogether - Real-Time Collaborative Notes App | *React.js, Node.js, Express.js, MongoDB*   **August 2024**
- Built a real-time collaborative note-taking app with WebSockets (Socket.io) for seamless multi-user editing and deployed the frontend on Vercel and backend on AWS EC2 for scalability
- Developed a RESTful API with Express.js and MongoDB, optimizing CRUD operations and improving database query performance, optimized database queries, significantly improving document retrieval efficiency

StockFlow - Real-Time Stock Market Data Pipeline | *Python, Apache Kafka, AWS*   **May 2024**
- Developed a real-time stock market data pipeline using Kafka Producers and Consumers, ensuring seamless data ingestion and fault tolerance with a distributed Kafka cluster on AWS EC2
- Designed a scalable and cost-effective data pipeline using AWS S3, Glue, and Athena, automating ETL jobs with AWS Lambda to enhance efficiency and query performance through serverless computing

InstaShop - Serverless E-commerce Platform | *AWS Lambda, API Gateway, EventBridge, Cognito*   **March 2024**
- Developed a fully serverless e-commerce backend using AWS microservices architecture, leveraging API Gateway, Lambda, and EventBridge for scalability, cost efficiency, and reliable event-driven communication
- Implemented authentication, security, and automation with Amazon Cognito for user management, IAM for role-based access control, and CI/CD pipelines using CodePipeline and CloudFormation, ensuring secure and efficient deployments

Experience

Electronic Health Records (EHR) Data Migration Intern   **February 2025 – Present**
Aspirus- ST.Luke's   *Duluth, MN*
- Extracting, validating, and transferring patient data from Meditech to Epic, ensuring accuracy, compliance, and seamless integration while optimizing workflows and supporting clinical teams

Peer Tutor   **August 2024 – December 2024**
Computer Science - University Of Minnesota Duluth   *Duluth, MN*
- Tutor students in Data Structures, Algorithms, and Object-Oriented Programming, focusing on debugging in Python, Java, and C++ while collaborating with faculty to develop instructional materials

Student Mentor   **May 2022 - Present**
Office Of Diversity and Inclusion - University Of Minnesota Duluth   *Duluth, MN*
- Guide freshmen and transfer students through orientation, goal-setting, and campus involvement, offering resources and strategies to support academic and personal success for a smooth university transition

Certifications

- AWS Certified Solutions Architect – Associate
  Amazon Web Services (AWS) – Issued Feb 2025 — Expires Feb 2028