

PANKHURI GUPTA

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Education

Northeastern University, Boston: MS in Computer Science Engineering

Jan 2024 – Dec 2025

Technical Skills

Languages: Java, JavaScript, TypeScript, R, Python, Bash, HTML, CSS, C, C#, PHP, C++

Cloud & DevOps: AWS, Kubernetes, Docker, Terraform, Jenkins

Tools & Databases: Visual Studio, Github, PostgreSQL, Jira, MySQL, MongoDB, Redis, Cassandra, Maven, Gradle

Technologies: Angular, React, Next.js, Node.js, Tailwind, JavaEE, Spring Boot, Hibernate, MVC, JUnit, Mockito, Kafka, ASP.NET, AJAX, Spring, Linux, Kibana, Elasticsearch, RabbitMQ, Tomcat, Apache, IIS, GraphQL, Git, JSON, XML

Professional Experience

Amazon Web Services, Inc. | Software Dev Engineer Intern | Austin, TX

May 2025 – Aug 2025

- Designed & developed a real-time Purchase Order Auditor system that reduced Time-To-Detection (TTD) of invoice discrepancies by **80%**, enhancing purchase order accuracy across all AWS Marketplace transactions
- Built a scalable, fault-tolerant architecture using AWS SNS, SQS, Lambda, DynamoDB to process over 1 million invoice events per month in near real-time
- Optimized CloudWatch metrics & alarms on DLQ size, latency, error rate, enabling proactive incident detection reducing mean time to detection (MTTD) by over **40%**, reducing message backlogs significantly
- Improved system resiliency & audit reliability during service disruptions, implementing automated purchase order data validation & silent failure detection, reducing manual escalations by **85%**, accelerating issue resolution by **95%**

Hexagon India Pvt. Ltd. | Full Stack Developer | Noida, India

July 2021 – Dec 2023

- Engineered a geospatial data processing pipeline using Node.js, Express.js, & PostgreSQL with PostGIS, enabling real-time spatial queries and interactive map rendering in Angular, improving map data load time by **50%**
- Delivered a GIS-based web application for feature tracking & regional search on interactive maps, enabling efficient filtering using Luciad RIA APIs, JavaScript libraries on M.App software, improving analyst productivity by 3×
- Optimized functionalities using Ext.js, C# .NET Core & Entity Framework, optimizing data retrieval & integration with SQL Server, reducing query response time by **15%**
- Integrated real-time geospatial data streaming via WebSockets in a Java app, enabling dynamic updates & usability

Tata Consultancy Services | Java Developer | Lucknow, India

Sept 2019 – June 2021

- Enhanced microservices-based Java Enterprise for TCS iON solutions ensuring **99.9%** uptime for critical fee processes
- Designed high-performance data processing modules using Java multi-threading & Collections API, improving concurrency and reducing execution time by **40%** through asynchronous processing
- Architected a Domain-Driven Design-based modular microservices architecture & optimized backend operations, improving code reusability by **40%**, with support to scaling 1M+ daily transactions
- Streamlined database operations by optimizing PL/SQL procedures, packages, and complex joins, improving transaction throughput by **50%** and supporting peak loads of 1M+ daily transactions

Academic Projects

Cloud Application for Peak Performance | <https://github.com/orgs/002478905/repositories>

Sept 2024 – Dec 2024

- Architected a scalable cloud-native platform with AWS infrastructure using Terraform & Packer, deploying VPCs, RDS, Route 53, and SSL certificates for secure communication, ensuring **99.9%** availability and enhanced reliability
- Implemented AWS SNS & Lambda for event-driven workflows, enabling seamless email verification via SendGrid
- Enhanced traffic management by configuring AWS security groups, safeguarding the infrastructure from unauthorized access
- Automated CI/CD pipeline improving scalability, leveraging EC2 Auto Scaling, Elastic Load Balancing, and GitHub Actions for testing, AMI creation, and rolling updates, reducing downtime by **35%**

ElderlyCare Solution | <https://github.com/pankhuri0209/elderlycare>

Jan 2024 – April 2024

- Built a React-based intuitive platform enabling elderly users to book & track appointments scaling 1k+ users, integrating an AI-powered assistant (EC Buddy) using the OpenAI API for personalized medical support & reminders
- Integrated Stripe with Node.js & Express for secure payment processing, tested to handle 500+ transactions/day with less than 300ms latency, & enabled real-time calendar synchronization with MongoDB
- Developed JWT-based authentication & RBAC in Node.js & Express, protecting sensitive data & ensuring 99.9% compliance with defined access rules in simulated workloads
- Implemented Multer-based file upload system, achieving less than 200ms average upload time for medical records

Achievements & Certifications

- * Awarded community award at ETHBoston2024 for building a secure data-sharing platform with NFT badging & security
- * Secured 2nd place at Webnova II Hackathon for developing an AI comparison tool using SIFT & BruteForce matching
- * Won 3rd place at Stacks Harvard Hackathon 2024 for developing a crypto payment platform for a pay-per-duration model