ARCHIT AGRAWAL

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PROFESSIONAL EXPERIENCE

Software Developer   **09/2023 - 05/2025**
Ed-Plus, Arizona State University
- Designed and deployed an enterprise-scale **LLM-powered chatbot** featuring sub-10s response time and advanced hallucination reduction techniques (Python, Lang Chain, OpenAI, Neo4j, Vector Database, SQL, caching)
- Implemented **data transformation pipeline reducing manual processing time from 4 hours to 15** minutes per transcript (Python, SQL, Pandas)
- Built **automated scripts for processing 10,000+ documents** according to structured specifications (Python, Google API)
- Developed comprehensive documentation and training materials, enhancing data literacy and **reducing support tickets by 40%**
- Created responsive front-end interfaces with React.js and Material UI, improving **user engagement by 35% and decreasing bounce rates by 20%**

Software Developer Intern   **06/2024 - 08/2024**
Knowledge Exchange for Resilience, Arizona State University
- Formulated high-performance **ETL pipeline processing 10,000+ faculty profiles daily**, improving data accuracy by 95% (Python, PostgreSQL)
- Conceptualized and deployed **20+ REST APIs** handling 10,000+ requests with 99.9% uptime (.NET CORE 8, C#, SQL, AWS EC2, S3)
- Reduced **API response time by 60% through query optimization**, data pagination and Redis caching layer
- Developed unit and stress tests for API endpoints ensuring system performance under high user traffic. (Python, Locust)

Software Engineer   **01/2022 - 07/2023**
Zeus Learning
- Refactored monolithic backend services into MVC microservices following SOLID principles to optimize and scale the infrastructure using Kubernetes, resulting in a **35% reduction in resource usage and a 20% cost reduction**. (.NET, C#, Redis, AWS, Nginx, Docker, Kubernetes, RabbitMQ)
- Achieved 99% uptime for microservices architecture serving 10,000+ daily requests.
- Executed CI/CD **pipelines reducing deployment time by 70%** and decreasing production incidents by 40%. (SonarQube, GitLab, Jenkins)
- Developed ML prediction system to optimize space reservation systems for booking desks and meeting rooms for 300+ locations**, enhancing occupancy rates by 30%** for Fortune500 companies. (Node.js, Nginx, Redis)
- Formulated **a node package for retrieving 10 latest messages** from Slack channels, including attached media, documents, and reactions into an internal social networking web app maintaining version control. (Node.js, Git, PostgreSQL)
- Built responsive single-page applications using React.js and Redux, implementing client-side state management and RESTful API integration that improved user experience scores by 40%

Software Developer Intern   **09/2021 - 12/2021**
EAT.FIT
- Managed cross-functional order tracking **system optimizing driver location tracking, reducing costs by 45% and enhancing user growth by 25%** quarter on quarter. (React.js, Google Maps API, Python)
- **Automated system to scrap product details and reviews** using script for better business data analytics, positioning of products, and improving customer service Managed software development life cycle sprints on Kanban. (Python)
- Developed a full **stack notification system using WebSockets and Express.js**, enabling real-time updates that increased customer satisfaction by 28% and reduced support calls by 35%.

TECHNICAL SKILLS

Languages and Frameworks: Python, C#, Go, Django, Flask, JavaScript, TypeScript, React.js, Node.js, HTML, CSS, .Net, SQL
Cloud and DevOps: AWS (EC2, S3, Lambda, SQS, EKS, DynamoDB, CloudWatch), Docker, Nginx, GitLab, Jenkins
AI/ML and Data: OpenAI, scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, PyTorch, llama index, TensorFlow, Lang Chain
Databases and Tools: MySQL, PostgreSQL, Redis, RabbitMQ, Pinecone, Git, Jira, Postman, Visual Studio, Locust, xUnit, Hugging Face, GraphQL
Certifications: Building Systems with the ChatGPT API, Lang Chain Chat with Your Data, Evaluating and Debugging Generative AI

EDUCATION

Master of Science, Computer Science   **08/2023 - 05/2025**
Arizona State University (ASU)   **GPA**: 4.0
Courses: Data Mining, Data Processing at Scale, Statistical Machine Learning, Data Intensive Systems, Cloud Computing, Mobile Computing

Bachelor of Technology, Information and Communication Technology   **08/2018 - 05/2022**
Dhirubhai Ambani Institute of Information and Communication Technology

PROJECTS

E-Commerce Platform   **09/2024 - 12/2024**
- Built a full-featured online shopping platform with user authentication, product catalog, and payment processing
- Implemented responsive front-end using React.js and back-end using Django REST framework
- Integrated PostgreSQL database with Redis caching for optimized performance.

Scalable Image Recognition as a Service   **01/2024 - 04/2024**
- Constructed an AWS cloud infrastructure SaaS using AWS EC2, AWS SQS, Lambda for automatic linear scaling based on demand providing image recognition service through deep learning models, serving 100 concurrent requests in 5 seconds.

Task Management System   **02/2024 - 05/2024**
- Created a collaborative project management tool with task assignment, progress tracking, and deadline notifications
- Built RESTful API with Flask and SQL Alchemy ORM for database interactions
- Designed intuitive UI with React.js and implemented JWT authentication

Real-Time Chat Application   **07/2024 - 10/2024**
- Developed a scalable chat platform with private messaging and group chat functionality
- Utilized Django Channels for WebSocket connections and Redis for message queuing
- Implemented geolocation features and interactive data visualizations with Plotly to visualize the location of users.

Fit Life Health Tracking App   **08/2023 - 12/2023**
- Programmed an Android Application suggesting personalized workout routines using machine learning and Fuzzy Logic Control in MATLAB using the measured heart and breath rates, tracking daily exercise goals.