

ANUSHA LAVANURU

LinkedIn: anusha-lavanuru | Portfolio: AnushaLavanuru | Email: al4568@columbia.edu | Phone: +1 3477515693

EDUCATION

Columbia University, New York	Sept 2023 - Dec 2024
<ul style="list-style-type: none">Master of Science, Computer ScienceCourses: ML, NLP, Algorithms, Databases, UI Design, VR/AR, Graphics, Human Computer Interaction, Data VisualizationTeaching Assistant: UI Design (Spring '25 & Fall '24), Introduction to Databases(Spring '24), Computing in Context(Fall '23)	

SKILLS

Languages:	Python, Go, Java, C++, C#, React, Next.js, TypeScript, Node.js, Express.js, JavaScript
Databases:	MySQL, PostgreSQL, DynamoDB, MongoDB, Redis, Milvus, InfluxDB
Tools:	FlaskAPI, Gin, Spring Boot, Figma, AWS, Kafka, GraphQL, Docker, Kubernetes, Jenkins, Git, Unity
Libraries :	OpenCV, Pandas, NumPy, Scikit, Matplotlib, TensorFlow , PyTorch, NLTK

WORK EXPERIENCE

Backend Engineer Arklex.ai, New York	Feb 2025 - Present
<ul style="list-style-type: none">Built an enterprise version of the Arklex AI platform by extending and integrating core product frontend, backend, and chat-bot etc. repositories (React, Next.js, Golang), enabling modular and client-specific SaaS deployments.Created a production-ready AMI by provisioning frontend, backend, bots and databases (MySQL, Redis, Milvus) within a lightweight K3s Kubernetes cluster on AWS EC2, enabling seamless deployment to enterprise private cloudsCollaborated on cross-region infrastructure migration from ap-southeast-1 to us-east-1, covering services like S3, ECR, RDS, ElastiCache, which reduced latency by 50ms and lowered operational costs by 15%	
Software Development Engineer Intern NomadFi, New York	May 2024 - Sept 2024
<ul style="list-style-type: none">Engineered modular React components for a fin-tech platform, including the homepage, dashboards etc., utilizing advanced state management with React Hooks, Context API, & Redux to deliver a responsive UI/UXBuilt an OCR-based invoice processing system in Python, automating the extraction of unstructured financial data, transforming it into a relational database format cutting manual processing time by 60%Integrated a backend pipeline with Java, Spring Boot, optimizing PostgreSQL data retrieval, trimming latency by 25%Contributed to blockchain-based RWA tokenization by designing Ethereum based architecture, integrating APIs (Plaid, Teller) for financial health assessment, and aligning features with trade finance standards	
Software Engineer Shure Incorporated, India	Aug 2021 - Aug 2023
<ul style="list-style-type: none">Built and deployed RESTful APIs with Flask (Python) to streamline audio analytics data pipeline for Shure Cloud, leveraging AWS (DynamoDB, S3, MSK). Also optimized data flow and integration, slashed processing time by 20%Designed and implemented scalable software frameworks using Python and Selenium, automating 100+ test cases and reducing manual efforts by 70%, significantly enhancing software qualityDeveloped back-end services and CI/CD pipelines using Python and Jenkins, streamlining build, testing, and release workflows, reducing deployment errors by 40%, and improving delivery timelines by 35%Optimized product workflows, reliability by driving automation and addressing bottlenecks in Agile cross-functional teams	

PROJECTS

Image Enhancement using GANs	
<ul style="list-style-type: none">Developed a photo enhancement pipeline using U-Net, Wasserstein GANs, improving image quality by 30% on NUS dataset	
Probing GPT-2 Layers in Relationship Analysis	[Github]
<ul style="list-style-type: none">Probed GPT-2 with Baukit, analyzing MLP and attention layers with SNLI corpus, trained classifiers on hidden states for identifying entailment, contradiction, and neutral relationships, revealing incremental learning across layers	
Postagging and Autocorrection	[Github]
<ul style="list-style-type: none">Explored multilingual POS tagging systems using HMM, RNN, LSTM, BiLSTM models for English, Bulgarian, Japanese and evaluated an autocorrection system leveraging n-gram language models and Viterbi algorithm with edit distance	

RESEARCH EXPERIENCE

Research Assistant Computer Graphics and User Interfaces Lab	Sept 2024 - Dec 2024
<ul style="list-style-type: none">Developed PolXR application on Oculus Quest 2 using Unity, C#, enabling intuitive geospatial data exploration for glaciologyImplemented shared mode networking with Photon Fusion and dynamic radargram rendering, reducing memory usage by 45% and scene load times by 40% while preserving high-res visuals	
Research Assistant Computer Enabled Abilities Lab	May 2024 - Dec 2024
<ul style="list-style-type: none">Developed an AR application using Unity and C# for android device to preserve the history, safety, and community stories of the Harlem region, incorporating feedback from local stakeholdersDesigned and prototyped application workflows using Figma to visualize interactive user interfaces and streamline AR development processes reducing iteration time	