ANUSHKA AGARWAL

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PROFESSIONAL EXPERIENCE

Columbia Climate School   New York, NY
Research Assistant   Jan 2025 - Present

- Develop production-ready FastAPI web service to serve ML pipeline through RESTful API endpoints.
- Implement Docker-containerized app on GCP, reducing manual analysis workflow by 80% for end-users.
- Architect modular Python backend services for pre-processing via OpenCV and TensorFlow to analyze 1000+ marine images.
- Optimize ResNet-50 feature extraction through GPU-accelerated parallel processing, enabling 20+ distinct species clusters.

Threepio   New York, NY
Software Engineer (Founding Team)   Sep 2024 - Dec 2024

- Launched a full-stack Django-React app for subtitle generation, reducing transcription processing time by 75%.
- Engineered a Python based microservice architecture handling 100+ concurrent API requests.
- Programmed secure JWT auth and RBAC system in Django REST Framework enabling secure access across multiple clients.
- Deployed and monitored the web app on AWS EC2 with CloudWatch, ensuring uptime and alert-driven performance tracking.

Intel   Bangalore, IN
Technical Intern   Jan 2024 - Jun 2024

- Containerized core services using Docker and deployed scalable test environments with Kubernetes, accelerating regression testing cycles by 45%.
- Integrated automated test execution into CI/CD pipelines utilizing PyTest and Selenium, reducing manual QA time by 70%.
- Enhanced internal Calculation Workbench tool by developing Python APIs for sales and agreement workflows to support 100K+ invoice records.
- Delivered 3 production-ready Q2 features in structured Agile sprints while collaborating under 2 senior engineers on code reviews.

PROJECTS

ServeHub

- Developed intuitive marketplace platform with React frontend, implementing dynamic form validation and state management.
- Integrated RESTful Flask APIs for core platform operations, improving user workflow efficiency by 30%.
- Designed a normalized PostgreSQL schema and optimized SQLAlchemy queries, reducing join overhead by 40%.
- Hosted the application on GCP Compute Engine and Cloud SQL for scalable and reliable performance.

SKILLS

- Programming Language: Python, C/C++, Java, ABAP, SQL, JavaScript
- Application Tools: GitHub, SAP Vistex, PostgreSQL, AWS (EC2), Google Cloud Platform, Postman
- Frameworks: React, Flask, Django, FastAPI, Docker, TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, Pandas, NumPy
- Specializations: Backend Development, Full-Stack Development, Agile Methodologies, Machine Learning, Computer Vision

EDUCATION

Columbia University   New York, NY
M.S. in Computer Science, Machine Learning Track   Expected Dec 2025

- Coursework: Applied Machine Learning, Computer Vision, Deep Learning, Artificial Intelligence, Databases, Algorithms
- Data Science Institute Scholar 2025
- Columbia Build Lab Engineer 2024

R.V. College of Engineering   Bangalore, IN
B.E. in Computer Science Engineering   Jun 2024

- Coursework: AI and ML, Artificial Neural Networks, Object Oriented Programming, Data Structures, Software Engineering
- Winner of UNESCO India Africa International Hackathon 2022
- Winner of Smart India Hackathon 2022