Kushagra Kanaujia

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EDUCATION

University of California, Santa Barbara Santa Barbara, CA
Bachelor of Science in Computer Science *Expected December 2026*

EXPERIENCE

Machine Learning Researcher Sep. 2025 – Present
Visual Layer (UCSB Capstone) *Santa Barbara, CA*
- Designed and deployed scalable computer vision experiments on AWS/Azure cloud infrastructure, quantifying dataset quality metrics and benchmarked deep learning model robustness using fastdup on distributed multi-GPU clusters
- Engineered data pipelines integrating ImageNet, COCO, iNaturalist with Docker, Azure Blob, AWS S3
- Trained CNN and ViT models with automated multi-GPU training via CI/CD, improving scalability by 30%

Software Engineer Intern June 2025 – Aug. 2025
Dawdle *Santa Barbara, CA*
- Architected and deployed production full-stack mobile anti-procrastination platform using React Native, Node.js, Express, and Firebase serving 1000+ active users, implemented analytics-driven product iterations that boosted daily active users by 18% and user retention by 25%
- Built scalable microservices architecture with JWT authentication, API rate limiting, and Redis caching layer, optimized 12+ A/B tested features using data-driven experimentation, increasing user conversion by 22%
- Implemented automated Docker CI/CD deployment pipelines with GitHub Actions, reducing production deployment time from 45 to 18 minutes while maintaining zero-downtime releases

Software Engineer Intern June 2024 – Aug. 2024
Smartshore *New York, NY*
- Engineered RESTful API microservices handling 2M+ monthly requests with JWT authentication, role-based access control, and rate limiting; achieved 99.9% uptime while reducing P95 latency by 40% through query optimization
- Optimized PostgreSQL queries with Redis caching, improving throughput 65% and halving peak database load
- Designed Grafana dashboards for 20+ endpoints; resolved 12 bottlenecks, improving throughput 55%

Machine Learning Engineer Intern Aug. 2021 – Dec. 2021
Stylesense.ai *Remote*
- Deployed production TensorFlow/Keras deep learning models on AWS EC2 infrastructure processing 1M+ images monthly at scale, improving model accuracy by 15% through ensemble optimization and hyperparameter tuning
- Refactored preprocessing pipelines, reducing training time 20% and cutting cloud spend by $5K/month

PROJECTS

BusTub Database Kernel | *C/C++, Concurrency, Database Systems* 2025
- Implemented LRU-K Replacer, Disk Scheduler, BufferPoolManager, and B+ Tree index for database buffer pool
- Profiled I/O, memory, and lock contention with flamegraphs to optimize performance

AI Trading Bot (ApexTrade) | *Python, Flask, Microservices, AWS* 2024
- Built event-driven microservices ingesting real-time tick data from 5+ cryptocurrency exchange APIs, normalizing to PostgreSQL with rate-limited RESTful endpoints for backtesting and algorithmic trading strategies
- Containerized multi-service application using Docker Compose and deployed to AWS EC2

KindnessKart | *React, Node.js, MongoDB, Redis* 2025
- Developed full-stack e-commerce platform for 500+ users with JWT auth and integrated payment APIs
- Built recommendation engine increasing AOV by 35%. Won Best Beginner Hack at SB Hacks XI

PUBLICATIONS

AI vs ML vs Deep Learning in Behavioral Environments | Paper International Journal, 2021
- Published research exploring comparative performance of neural models and scalable ML systems

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, TypeScript, SQL (PostgreSQL), Go, R
Frameworks: React, Node.js, Express, Flask, FastAPI, TensorFlow, Keras
Developer Tools: Git, Docker, GitHub Actions, AWS, Azure, Redis, MongoDB, Grafana, VS Code
Libraries: pandas, NumPy, Matplotlib, PyTorch