Ananya Deepak Deoghare

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Summary

Machine Learning Engineer with 5+ years of industry experience building production ranking, CTR, and conversion models and scalable data pipelines; M.S. in ECE from UCLA with a *SIGGRAPH* publication. Technical owner of weekly-retrained CTR, conversion, and constrained marketplace optimization models, delivering a holdout-validated ∼10% profit lift on a $1M+ margin segment across FinTech and Insurance verticals.

Experience

QuinStreet Foster City, CA
Senior Associate Algorithm Engineer Jul 2026 – Present

- Technical owner of Personal Loans ML ranking (**3M+ annual inquiries**), driving expansion from subprime to higher-quality traffic (∼$2M margin opportunity), guiding architecture, and setting the roadmap with Product, Business, and Engineering.
- Developed the Personal Loans XGBoost vendor conversion (CVR) model and own the PL CTR model, with weekly cron-scheduled retraining; a persistent 90/10 holdout against the legacy lookup baseline shows a **∼10% profit lift** on a $1M+ margin segment.
- Lead a margin preservation initiative combining CTR and CVR predictions to filter unprofitable leads before purchase, projecting an **8–12% reduction** in wasted lead spend, varying by publisher and traffic.
- Own the team's Cython simulation framework, which stress-tests ranking strategies before release and runs via daily cron jobs to monitor Auto Insurance production health; cut runtime by **50%** and maintain parity with live production logic.
- Onboard and mentor new algorithm engineers on ranking architecture and code reviews; authored the team's code-quality and model-release standards, now followed team-wide.

Associate Algorithm Engineer Jun 2023 – Jun 2026

- Built and shipped production XGBoost CTR ranking models for Banking, Auto Insurance, and Personal Loans, averaging a **10% improvement** over legacy 14-week lookup-table baselines in live display serving.
- Implemented the Hungarian algorithm for optimal constrained ranking assignment and validated it against the greedy baseline through staged online A/B tests (90/10, then 50/50) on matched publisher traffic, lifting margin revenue **2.5–8%** depending on traffic; now live in Auto Insurance and Banking.
- Engineered user and lead features guided by SHAP attribution and correlation analysis; built Amazon Redshift and Tableau evaluation workflows and partnered with Platform Engineering to validate and deploy models.

VidMob New York, NY
Machine Learning Intern Jun 2022 – Sep 2022

- Developed and evaluated deep learning models in Python to score creative ad assets and support automated engagement prediction and recommendation pipelines within an advertising analytics platform.

Accenture Bengaluru, India
Software Engineer Jun 2019 – Jul 2021

- Automated pharma sales ETL workflows in Python, SQL, and Apache Hive, cutting analysis time by **50%**.
- Built drug-sales analytics and Tableau dashboards lifting competitor match rates by **20%**; trained 10 graduate hires.

Research Experience & Publications

University of California, Los Angeles (Visual Machines Group) Los Angeles, CA (Remote 2020–2021)
Student Researcher Jul 2020 – Jan 2023

- Co-author, *ACM TOG (SIGGRAPH 2022)*: "Blending Camera and 77 GHz Radar Sensing for Equitable, Robust Plethysmography."
- Proposed a shift-robust loss function in PyTorch that reduced pulse prediction error by **40%**, and contributed to an adversarial multimodal fusion pipeline combining RGB camera and 77 GHz radar to mitigate skin tone bias in remote plethysmography.

Indian Institute of Science (IISc) Bengaluru, India
Research Intern, Artificial Intelligence and Robotics Lab Jan 2019 – Jun 2019

- Developed and optimized deep neural networks to analyze fMRI scans for early Autism detection in Dr. Sundaram's lab, achieving **80% accuracy** on cleaned neuroimaging data. Code: github.com/AnanyaDeoghare/Detecting-Autism-using-fMRI-Scans

Education

University of California, Los Angeles (UCLA) Los Angeles, CA
M.S. in Electrical and Computer Engineering, GPA: 3.97/4.0 Sep 2021 – Oct 2023

PES University Bengaluru, India
B.Tech. in Electronics and Communication Engineering, GPA: 8.5/10 Aug 2015 – Aug 2019

Technical Skills

Languages & Core Tools:	Python, SQL, Cython, C++, Java, Git, Linux/Cron
ML & Libraries:	XGBoost, PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, SciPy, SHAP, OpenCV
Data & Cloud Tools:	Amazon Redshift (AWS), Apache Hive, MySQL, Tableau
ML Domains:	Ranking & Recommendations, CTR & Conversion Modeling, Constrained Optimization, Online A/B Testing & Holdout Experimentation, Model Monitoring, Feature Engineering, Multimodal Deep Learning, Algorithmic Fairness