Anmol Chokshi

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Education

University of Massachusetts Amherst — **September 2024 - May 2026 (Expected)**
Masters of Science in Computer Science — *Massachusetts, USA*

Sardar Patel Institute of Technology — **July 2020 - June 2024**
Bachelor of Technology in Information Technology (CGPA: 9.41/10) — *Mumbai, India*

Experience

Machine Learning Intern — **January 2023 - July 2023**
Indian Institute of Technology, Bombay — *Mumbai, India*

- Developed a **mobile app** for extracting and **authenticating** user's **fingerprints** in a contactless manner via a smartphone camera.
- Implemented image processing algorithms and signal processing techniques in combination with a **custom Siamese Neural Network** achieving a competitive **2.5%** Equal Error Rate while utilizing **37% fewer parameters** than state-of-the-art techniques.
- Created a novel minutiae matching algorithm grounded in **pattern recognition** and **mathematical analysis**, yielding an AUROC score of **0.987** and improving identification accuracy by **20%**.
- Collaborated with UIDAI, a national government agency, to explore nationwide deployment of the application, potentially benefiting **1.4 billion** citizens.

Technical Consultant — **June 2022-August 2022**
Dream11 — *Mumbai, India*

- Built a predictive model using **Multiple Linear Regression** to forecast employee attrition with **98.7%** accuracy, and integrated it into a **Django**-based web application at Dream11, a leading fantasy sports platform.
- Overcame overfitting with **L1 regularization** and feature selection, identified key factors influencing attrition and provided actionable insights that improved employee satisfaction by **15%**.
- Designed real-time interactive dashboards for engagement spend analysis using **statistical methods** and Google Data Studio, aiding Management and HR Business Partners to **analyze organizational trends**.

Projects

PIXIE | *OpenCV, Tensorflow, Keras* | *Role: Machine Learning Researcher* — **Paper**

- Devised a novel **loss function** tailored for **binary semantic segmentation**, that improves model performance by **25%**, establishing a new standard for image analysis.
- Achieved dice coefficient and Intersection over Union scores of **0.9** and **0.85**, respectively, on three different datasets.
- Enhanced state-of-the-art model performance by **15%** through comprehensive model selection analysis, with the pioneering results published, furthering the field's understanding.

Netflix-Exploratory Data Analysis | *Python, Pandas, NumPy, Matplotlib* | *Role: Data Analyst* — **GitHub**

- Analyzed Netflix dataset consisting of **10000+** movies and shows and **222 million** users, to derive insights and uncover trends and patterns on content distribution, ratings and genres using data visualization and **statistical techniques**.

Autonomous Pothole Detection in Roads | *Python, Scipy, Seaborn, Keras* | *Role: Team Leader* — **Paper**

- Pioneered an advanced pothole detection system utilizing **VGG16** for feature extraction and a custom Siamese neural network with **triplet loss**, achieving a competitive **96.12% accuracy** and **0.988 AUROC** score.
- Demonstrated computational efficiency and cost-effectiveness by utilizing **33% fewer parameters** and **20% less data** for training.

Publications

- **Anmol Chokshi**, Vansh Jain, Rajas Bhope, and Sudhir Dhage (2023). "SigScatNet: A Siamese + Scattering based Deep Learning Approach for Signature Forgery Detection and Similarity Assessment". In: *2023 International Conference on Modeling, Simulation and Intelligent Computing (MoSICom)*. DOI: 10.1109/MoSICom59118.2023.10458765
- Guruprasad Parasnis, **Anmol Chokshi**, Vansh Jain, and Aryan Gwalani (2023). "EyeSpy Analytics - An Advanced CCTV Analytics Solution". Published with Indian Patent Office, Patent Application No. 202321038381

Technical Skills & Certifications

Languages: Python, JavaScript, C++, SQL, Java **Frameworks**: Tensorflow, Numpy, OpenCV, Django, AWS
Analytics: Linear Algebra, Calculus, Probability, Statistics, Data Structure and Algorithms, Data Visualization
Certificates: CS50's Introduction to Artificial Intelligence with Python from Harvard University — Certificate
JP Morgan Chase's College to Corporate SCOPE program. — Certificate

Leadership Roles & Extracurriculars

- **Chief Speaker** at the Artificial Intelligence and Machine Learning Summit, at Sardar Patel Institute of Technology
- **Barclays Datastellar Hackathon** finalist, where we built an event-driven customer digital experience application utilizing various machine learning algorithms and AWS cloud services