Shaan Chanchani

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EDUCATION

Purdue University West Lafayette, IN
B.S.E in Computer Engineering | Concentration in AI/ML | Major GPA: 3.5 May 2025

Skills:
Languages: Python, C/C++, PySpark, MATLAB, SQL, JavaScript, TypeScript, SystemVerilog
Web/Cloud: React, FastAPI, Flask, GCP, AWS, Docker, Streamlit
Tools: Git, GDB, gcc, Valgrind, Make
ML/Data: PyTorch, Scikit-learn, MLflow, Tensorboard, NumPy, Pandas, Polars, Databricks, OpenCV, SciPy, Optuna

EXPERIENCE

Machine Learning Engineer, Huddlevision August 2024 – Present
Miami, FL — Remote

- Architected scalable ML serving backend deploying player detection models with TorchServe on GCP Compute Engine, implementing player tracking via Cloud Functions, and managing Cloud Storage/Datastore to enable production video analytics services
- Designed and developed a state-of-the-art computer vision system combining field registration and player tracking models, enabling automated analysis of football film
- Trained a self-supervised deep learning model for field registration, leveraging synthetic data generation techniques to enhance performance on diverse game footage; achieved **97%** median accuracy on unseen test data
- Partnered with Tracking Football to deliver advanced performance metrics to **100+** scouting departments across NFL teams and all FBS D1 conferences, revolutionizing the talent evaluation process at the collegiate and high school levels

Engineering Intern, John Deere May 2024 – August 2024
Waterloo, IA

- Trained and deployed XGBoost model predicting factory station-to-station time, achieving **118%** higher accuracy than existing system metrics
- Built end-to-end data pipeline using SQL and PySpark to process **10M+** records from Oracle/SQL Server databases through enterprise data lake, including custom feature engineering to maintain accuracy during shift changes and breaks
- Containerized solution with REST API utilizing Databricks Model Serving, integrated real-time inferencing within codebase managing autonomous material delivery robots using Python
- Generated **$10M+** in projected annual savings by preventing manufacturing bottlenecks with early intervention; awarded **2nd** place in company-wide hackathon

Researcher, Video Analytics for Daily Living Lab Aug 2023 – Jan 2024
Purdue University, West Lafayette, IN

- Fine-tuned a deep CNN for pose estimation and refactored post-processing code to a robust, maintainable Python library
- Revamped algorithm to allow for seamless modifications in the keypoint model without disrupting system functionality
- Enabled autonomous, low-cost, and minimally intrusive methods for livestock health assessment in commercial farms

Lead Developer, Video Analytics for Understanding Animal Behavior Aug 2022 – May 2023
Purdue University, West Lafayette, IN

- Evaluated pre-trained object detection models on **1.5** TB of wildlife footage from a network of **120** camera traps in Senegal
- Developed a GIS web-app to interpret results from a species classification model ran on captured footage
- Led a team to successfully recover **94%** of lost image metadata using a Python OCR library

Teaching Assistant, ENGR-132 Jan 2022 – May 2022
Purdue University, West Lafayette, IN

- Deployed weekly scripts to grade MATLAB assignments from over **150** first year engineering students

PROJECTS

Fantasy Football Draft Prediction Tool Summer 2023

- Automated a web scraping pipeline to maintain a dataset of recently completed drafts, reflecting changes in player values
- Engineered 25 draft environment features to train a classifier achieving 93% top-2 accuracy in predicting next pick position
- Created user-friendly web app integrating models for various league formats and player head shots through ESPN's API