#### SYNA MALHAN

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#### SUMMARY

Sophomore in Computer Science and Data Science, Machine Learning, Computer Vision, Fullstack Developer, Looking for Summer 2025 Internships

#### EDUCATION

## Arizona State University, Tempe, AZ

Expected Graduation: May 2027

Bachelor of Science in Computer Science | Minor in Business & Data Science

GPA: 4.0

Awards: Dean's List Fall 23, Dean's List Spring 24, Dean's List Fall 24 New American University Scholarship, Grace Hopper C Scholar.

#### SKILLS

Technical: TensorFlow, Kafka, PyTorch, Keras, Sklearn, Docker, AWS, Streamlit, OpenAI, Pandas, Numpy, Matplotlib, Plotly, Generative AI, Computer Vision, SQL, Node.js, ReactJS, NextJS, AngularJS, MongoDB, Kubernetes, Cloud Technologies (AWS), Test Automation, QA Methodologies Languages: Python, Java, C++, SQL, Swift, HTML, CSS, JavaScript, TypeScript, ReactJS, AngularJS, R, C

#### PROFESSIONAL EXPERIENCE

#### Cloud Front End Developer | Arizona State University AI Cloud Innovation Center

Aug 2024 – Present

- Built cloud infrastructure with AWS and UI, improving user experience for public sector solutions.
- Collaborated on AI/ML projects, supporting CIC operations and generating status reports for stakeholders.

#### Intern in Digitalization | Jindal Steel and Power Ltd

May 2024 - July 2024

- Developed full-stack app with AngularJS, Spring Boot, and SQL, improving data retrieval speed by 15%.
- Deployed the app on Tomcat and integrated cloud services to enhance system performance.

## Intern in Machine Learning and Data Analytics | Ripik.AI

July 2024 - Aug 2024

- Engineered algorithms using YOLO and Ultralytics, improving accuracy by 80%.
- Trained OCR models and integrated AI solutions into operations, increasing recognition accuracy by 25%.

## Software Engineering Fellow | Headstarter AI

July 2024 - Sept 2024

- Built 5+ AI apps using NextJS, OpenAI, Pinecone, StripeAPI, achieving 98% accuracy.
- Led 4+ engineering fellows in full-stack development, with coaching from Amazon, Bloomberg, and Capital One engineers.

#### PROJECTS

#### Last Point Distribution Analysis | Python, Streamlit, K-means Clustering, Folium

May 2024 – July 2024

- Optimized dispatch operations with K-means clustering and real-time cost calculations, improving delivery efficiency.
- Enhanced operational insights using Folium and API-driven geospatial analysis.

# $\textbf{Plate Mill FG Forecasting} \mid \text{Python, XGBoost, ARIMA, Prophet, Random Forest}$

May 2024 – July 2024

- Deployed predictive models (XGBoost, ARIMA, Prophet) to forecast finished goods, improving dispatch planning.
- Conducted data cleaning, feature engineering, and model evaluation to boost accuracy.

# $\textbf{CropGenius} \mid \textbf{XGBoost Regressor}, \textbf{Random Forest Classifier}, \textbf{Streamlit}, \textbf{Weather API}$

July 2024 – July 2024

- Developed CropGenius to provide 100% accurate crop recommendations using XGBoost and Random Forest.
- Integrated weather data via API to enhance model predictions and created a user-friendly interface with Streamlit.

# Slab Sizing | Ultralytics, YOLO, Python, Computer Vision

June 2024 – Aug 2024

- Optimized computer vision algorithms using YOLO, increasing measurement accuracy by 80%. Worked with FastSAM and Object detection
- Validated system precision and efficiency with extensive testing.

## Options Pricing and Risk Assessment Tool | Python, Streamlit, Monte Carlo, Black-Scholes

Dec 2024 – Dec 2024

- Developed a financial tool to calculate option pricing using Monte Carlo simulations and Black-Scholes.
- Integrated risk metrics (VaR, ES) and visualized data to assist users in making informed financial decisions.

## Wildlife Monitoring and Conservation | Python, TensorFlow, PyTorch, SAM, FastSAM

Dec 2024 – Dec 2024

- Implemented an automated system to detect and monitor wildlife using YOLO/Faster R-CNN for object detection and SAM/FastSAM for segmentation.
- Classified animal species, tracked movements, and monitored population density to support conservation efforts.

#### Medical Image Analysis for Early Disease Detection | Python, TensorFlow, Keras, CNNs (ResNet, VGG), U-Net

Jan 2025 - Jan 2025

- Developed a CNN-based model to detect anomalies (e.g., tumors, fractures) in X-rays, MRIs, and CT scans using U-Net for image segmentation.
- Enhanced diagnostic accuracy and reduced the workload for radiologists by automating anomaly detection and analysis.

## Portfolio Analyzer and Stock Prediction Dashboard | Python, Streamlit, Random Forest, LSTM

Dec 2024 - Dec 2024

- Developed a Streamlit-based stock portfolio management app with real-time tracking, risk-return analysis, and machine learning-driven stock price predictions.
- Integrated Random Forest and LSTM models for 7-day forecasting, interactive visualizations with Plotly, and financial metrics like Sharpe and Sortino ratios for portfolio optimization.

# OCR Training | Open-Source Donut Model, Python, AWS OCR, Azure OCR

July 2024 - Aug 2024

Dec 2024 - Dec 2024

• Trained custom OCR models, improving recognition accuracy by fine-tuning the Donut model.

Evaluated AWS and Azure OCR services for enhanced validation and performance.

# Emotion Detection from Images | Hugging Face Transformers, Streamlit, Python Pullt on emotion detection are using Hugging Facel's PAPEPTs based model to closeify amotions from text and images

Built an emotion detection app using Hugging Face's RoBERTa-based model to classify emotions from text and images.

• Visualized emotion scores in real-time with interactive charts in Streamlit.