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.

Plate Mill FG Forecasting | 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.

CropGenius | XGBoost Regressor, Random Forest Classifier, Streamlit, 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*
- 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   *Dec 2024 – Dec 2024*
- 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.