Syna Malhan

(602) 561-9842 | synamalhan22@gmail.com | https://linkedin.com/in/synamalhan | https://github.com/synamalhan | https://synamalhan.github.io/website/

SUMMARY

Computer Science student (4.0 GPA) with hands-on experience in machine learning, computer vision, and AI system development. Strong background in deep learning, OCR, RAG systems, and data-driven applications using Python, Transformers, YOLO, and Neo4j. Proven ability to build end-to-end AI pipelines, fine-tune models, and deliver real-world impact through human-centered design and technical rigor.

SKILLS

Machine Learning & AI: Transformers (BERT, RoBERTa, Donut), YOLO, U-Net, XGBoost, LSTM, ARIMA, Prophet, RAG, LangGraph, FastSAM, SAM

Data Science & Analytics: Pandas, NumPy, scikit-learn, SQL, Matplotlib, Streamlit, Plotly, FRED API

Computer Vision: OpenCV, TensorFlow, Keras, Ultralytics, FastSAM, OCR (Donut, AWS OCR, Azure OCR)

Tools & Frameworks: Python, React, FastAPI, Flask, Neo4j, Hugging Face, Ollama, Firebase, Docker

Platforms & Deployment: Streamlit, Vercel, Supabase, GitHub Pages, Apple Developer Tools

Collaboration: Git, Agile, Scrum, Figma, Postman, VSCode, Zoom

EDUCATION

Arizona State University, Tempe, AZ — Bachelor of Science in Computer Science | Minor in Data Science

GPA: 4.0 | Graduation: 2027

Awards: Dean's List (4x), New American University Scholar, Grace Hopper Celebration Scholar

EXPERIENCE

GenAI Intern | *Enrest and Young* | 2025-06 - Present
- Collaborated on building visualization-based AI systems for enterprise applications using Retrieval-Augmented Generation (RAG).
- Utilized Neo4j for graph-based data modeling and relationship mapping to improve spatial and contextual insights.
- Developed interactive dashboards and visual workflows to demonstrate AI outputs and knowledge graph structures.
- Participated in virtual sprint planning and team reviews, contributing to project documentation and technical presentations.

Cloud Front End Developer | *ASU AI Cloud Innovation Center* | 2024-08 - Present
- Collaborated with cross-functional teams to design UI for public sector applications.
- Created wireframes and data visualizations to illustrate spatial usage and cloud workflows.
- Regularly reported progress via virtual meetings and managed tasks using cloud-based tools.

ML and Data Analytics Intern | *Ripik.AI* | 2024-07 - 2024-08
- Trained object detection models (YOLO), improving accuracy for industrial use cases.
- Developed OCR models and boosted form recognition performance by 25%.
- Produced dashboards and visual analytics for client reports.

Intern in Digitalization | *Jindal Steel and Power Ltd* | 2024-05 - 2024-07
- Developed internal data dashboards with AngularJS and Spring Boot.
- Enhanced visual clarity of operational layouts by redesigning space-related UI elements.
- Integrated performance metrics and reports into stakeholder presentations.

Software Engineering Fellow | *Headstarter AI* | 2024-07 - 2024-09
- Built data-rich, interactive AI apps using React, OpenAI APIs, and visualization libraries.
- Led peer reviews and presentation sessions via Zoom, enhancing team collaboration remotely.
- Led 4+ engineering fellows in full-stack development, with coaching from Amazon, Bloomberg, and Capital One engineers.

PROJECTS

Wildlife Monitoring and Conservation — YOLO, Faster R-CNN, SAM, FastSAM, Python
- Automated species detection and segmentation from camera trap & satellite imagery.
- Used ensemble models (YOLO + FastSAM) to reach 92%+ detection accuracy in variable lighting.
- Enabled 24/7 monitoring and alerting of endangered species movement patterns.

AI Research Paper Summarizer — Python, Streamlit, HuggingFace (BART)
- Extracted full-text from PDFs and generated abstractive summaries.
- Enabled summary tuning via sidebar controls and preview/download capabilities.

Slab Sizing — YOLO, OpenCV, Python
- Automated detection of slab dimensions using object detection and image processing.
- Calibrated YOLO model to recognize contours and measure length/width accurately.

Text-Optimized Image Generation Model — HuggingFace, Diffusers, PyTorch, LoRA, Stable Diffusion
- Fine-tuned Stable Diffusion with LoRA adapters for high-clarity text generation in images.
- Achieved significant improvements in OCR accuracy on generated visual forms.
- Created custom dataset with labels, signs, and form layouts for supervised training.

Credit Risk RAG Model — LangGraph, Neo4j, Streamlit, Ollama, Pandas
- Built a retrieval-augmented reasoning system using Neo4j for credit policy graphs.
- Delivered explainable credit decisions through LangGraph and Ollama inference.
- Built a user-facing dashboard in Streamlit for interactive exploration of risk factors.

Plate Mill Finished Goods Forecasting — XGBoost, ARIMA, Prophet, Random Forest, Python
- Built ensemble and time series models to forecast weekly dispatch volumes.
- Improved forecasting accuracy by 30%, enhancing supply chain decisions.
- Delivered visual dashboards comparing model performance over time.

Portfolio Analyzer & Stock Prediction Dashboard — Streamlit, LSTM, Random Forest, Plotly
- Built a real-time portfolio tracker with ML-based stock forecasting.
- Integrated LSTM for sequential data and RF for trend smoothing.
- Delivered daily insights with 87%+ predictive accuracy.

CropGenius – AgriML Crop Recommender — XGBoost, Random Forest, Streamlit, Weather API
- Developed crop recommendation engine using soil and weather datasets.
- Achieved 100% accuracy on validation and real-world scenarios.
- Integrated live weather API and built an interactive UI with Streamlit.

Last Point Distribution Optimization — K-means Clustering, Python, Folium, Streamlit
- Used K-means to cluster delivery points and reduce path overlaps.
- Created geospatial maps and real-time cost calculators in Streamlit.
- Improved logistical efficiency in dispatch operations.

Options Pricing & Risk Simulator — Monte Carlo, Black-Scholes, Streamlit, Python
- Developed financial dashboard for option pricing and scenario testing.
- Implemented VaR/ES risk metrics with interactive visualizations.