

# ATHARVA GUNDAWAR

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## EDUCATION

**Arizona State University**  
*Master's, Artificial Intelligence*

**August 2023 - May 2025**

**Vellore Institute of Technology**  
*Bachelor's, Computer Science*

**July 2019 - August 2023**  
GPA: 3.32

## PROFESSIONAL EXPERIENCE

**Prasath Lab**  
*Research Intern*

**Cincinnati, OH, USA**  
*December 2021 - January 2023*

- Enhanced neural network performance by 4% through the implementation of higher-order transformation functions, contributing to machine learning algorithm development.
- Developed a framework to enable dynamic selection of style or content percentages, resulting in real-time similarity scoring, aligning with product design and artificial intelligence principles.

**Samsung Research**  
*Research Intern*

**Remote**  
*January 2022 - October 2022*

- Led a team in developing a federated shot suggestion system for Samsung phones using machine learning algorithms and Python
- Trained and fine-tuned models using PyTorch and TensorFlow to handle over 30 scenes for the camera suite

**Blackcoffer**  
*Data Analyst*

**Remote**  
*July 2021 - December 2021*

- Developed agile AI pipelines using Python, TensorFlow, and PyTorch to process 1000+ images per second for background and watermark removal, improving processing speed and efficiency.
- Optimized Neo4j database architecture, reducing storage space by 40% through the development of efficient data transfer and analysis pipelines.

## PROJECTS & OUTSIDE EXPERIENCE

### ALGORITHMIC TRADING BOT

- Implemented an AI crypto trading bot that would use numerous technical indicators as inputs to the model to make trades in the real market with an average monthly ROI of 5%

### STYLE SIMILARITY

- Defined Exponential contrastive loss function to calculate the style difference between images. Siamese networks based on vision transformer and CNN were used to implement the project

### COMICCALL

- Delivered a new video-compression method that used facial keypoint detection, to compress the image on the sender's side and synthetically generate the image on the receiver's side using vision transformers

## SKILLS

**Skills:** Computer Vision, Data Analysis, Data Science, Natural Language Processing (NLP), Reinforcement Learning

**Programming/Scripting Languages:** Python, C/C++, JavaScript, Julia, MATLAB, Go, Bash, SQL

**Frameworks/Tools:** Tensorflow, Pytorch, Flask, Git, FastAPI, OpenGL, OpenCV, Keras, Docker, Jupyter

**Certifications:** Nano-Degree in Deep learning by Udacity and 4 others

## RESEARCH PUBLICATIONS

- Lodha, S., Gundawar, A. SQL attack detection using Machine Learning and BERT. Springer. 3rd EAI International Conference on Cognitive Computing and Cyber Physical Systems. Nov 2022. Best Paper Award. DOI: [https://link.springer.com/chapter/10.1007/978-3-031-28975-0\\_1](https://link.springer.com/chapter/10.1007/978-3-031-28975-0_1)
- Gundawar, A., Lodha, S. Enhanced dense layers using a quadratic transformation function. Springer. 5th EAI International Conference on Big Data Innovation for Sustainable Cognitive Computing. Nov 2022. DOI: [https://doi.org/10.1007/978-3-031-28324-6\\_1](https://doi.org/10.1007/978-3-031-28324-6_1)
- Lodha, S., Gundawar, A. et al. Comparing new higher order transformation functions for highly efficient dense layers. Springer. Neural Processing Letters (Impact factor: 2.565). 2023. DOI: <https://doi.org/10.1007/s11063-023-11343-9>