AGASTYA SETH

MS Computer Science | Arizona State University
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"Eager to contribute to data science and AI, with a focus on NLP, backed by a solid base in software engineering and machine learning"

EDUCATION

ARIZONA STATE UNIVERSITY (Tempe, AZ) — GPA: 4.22/4.0
Masters of Science in Computer Science *(Relevant coursework: NLP, Data Visualization, Machine Learning Accelerator Design)* — Aug 2023 - May 2025

SHIV NADAR UNIVERSITY (UP, India) — GPA: 3.44/4.0
Bachelors of Technology in Electronics and Communication Engineering (Minor in Mathematics) — Aug 2016 - Jun 2020

STANFORD UNIVERSITY (Stanford, CA) — GPA: 4.13/4.0
Visiting Undergraduate Student | Data Science & Technology Entrepreneurship — Summer 2018

WORK EXPERIENCE

CADENCE DESIGN SYSTEMS — Noida, India
Software Engineer II (R&D) — Jul 2020 – Jul 2023

- Innovated within the R&D team on the Quantus Parasitic Extraction Cell-level tool, utilized by industry giants like Apple and Qualcomm, developing high-efficiency algorithms rooted in graph theory and geometry processing, contributing to over 10 significant projects.
- Led AI-driven projects, including a Large Language Model (LLM)-based model with a vector database for querying output files and enhanced information retrieval, and applying deep regression models to optimize the ETA calculator of the Quantus tool.
- Managed and optimized core libraries and customer-oriented issues, enhancing preprocessing, flow optimization, and messaging, and led the enhancement of the Rccompare tool for efficient multi-million-net design comparisons.
- Presented AI-focused projects at internal conferences, underscoring the integration of machine learning expertise in the industry
- **Stack:** C++, Python, Valgrind, Parasoft, ASAN, Perforce, GDB, Perl, Ruby, Linux, Shell, PyTorch, Transformers, Scikit

LIQVID <> SHIV NADAR UNIVERSITY - NLP RESEARCH INITIATIVE — Remote (Part-time)
Data Science Consultant — Aug 2020 – Sep 2021

- Orchestrated cutting-edge research alongside Prof. Rajeev Kumar (SNU) and LiqVid English Edge, resulting in an AES tool boasting an 82% kappa score across six essay sets, achieved through a novel application of transformer-based deep language models - using DistilBERT and an ensemble LSTM-model with three sequence models for enhanced explainability and refined fine-tuning.
- Our novel approach with near SOTA accuracy facilitated adoption by billion-dollar publishing companies & testing agencies like Wiley.
- **Stack:** Python, PyTorch, Keras, TensorFlow, AWS EC2, SageMaker, Docker, Kubernetes

VISENZE — Singapore
Data Science Intern — Jan 2020 – Jul 2020

- Managed data-rich projects (100s of datasets, 10+ projects) to improve flagship products for billion-dollar brands like Sephora.
- Improved F1-scores for fashion-attributes models by 15-20% via augmented data, attention models, & hyperparameter tuning.
- Innovated perspective classification and group models, optimizing efficiency through unique pipelines and a T-SNE sufficiency-based image parsing algorithm, reducing model iteration turnaround time by 10x.
- **Stack:** Python, PyTorch, Keras, ONNX, JupyterLab, Docker, BS4, Selenium, JS, HTML/CSS

RELEVANT PROJECTS

Exploring Reinforcement Learning Methods for Reasoning in Large Language Models (Prof. Baral's CogInt NLP Lab @ ASU) — Present
Visualizing Argument Structures in Persuasive Essays through Argument Mining (NLP research project under Prof. Chris Bryan) — Present
The Art of Defending: A Systematic Evaluation and Analysis of LLM Defense Strategies on Safety and Over-Defensiveness — 2023
Schizophrenia Detection and Prevention through 3D-CNN on EEG and f-MRI Data (UG Research) — 2019
SkiNet - Skin Segmentation and Melanoma Classification (Deep Learning Course Project) — 2019
GreenCarbon - DLT-based Sustainability Platform for Product Lifecycles and Personalized Carbon Scores (Stanford SVIA) — 2018

ACHIEVEMENTS

Smart India Hackathon 2019 - Winner: Addressed EV range-anxiety with Tata Motors (Asia's largest Hackathon, 300k participants)
Google Science Fair 2014 - Regional Finalist: Crafted an Android app for real-time crop prices, empowering Indian farmers
Shiv Nadar University 70% Merit-Based Scholarship

ADDITIONAL

Papers/Publications: QueryLog: Querying Quantus Output files using LLMs, Quantus 3DIC Inter-die Extraction (IDX)
Technical Skills: C/C++, Python, MERN, SQL, MongoDB, R, MATLAB, Java, Kotlin, Verilog, Linux, Shell, Ruby, Perl, VLSI CAD
Deep Learning: CNNs, RNNs, OpenCV, Autoencoders, GANs, LSTMs, BERT, Sequence Models, LLMs
Software: Jupyter, QtCreator, Valgrind, Android Studio, AWS, Perforce, Git, Docker, Kubernetes, Apache, Spark, Django, HTML/CSS
Certifications/Select Coursework: Deep Learning Specialization, Full-Stack Web Dev, Linear Algebra, Optimization, Game Theory
Communities/Activities: Core member at Roboyantriki (SNU Robotics), Working Committee at Snuphoria (SNU Music Society)