HARSHIT SONI

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EDUCATION

Binghamton University, State University of New York *May 2025*
Master of Science in Computer Science, Artificial Intelligence Track | **Cumulative GPA:** *3.6 /4.00*
Relevant Courses: Data Structures and Algorithms, Machine Learning, Artificial Intelligence, Programming Language, Design Patterns

TECHNICAL SKILLS

Languages: Python, SQL, C, C++, HTML/CSS, JavaScript, Java, MATLAB, Shell
Tools: Flask, AWS (S3, EC2, IAM), GCP, Pandas, NumPy, GIT, Scikit-learn, Microservices (Kubernetes & Docker), TensorFlow, ETL
Additional: Automation, Data Analysis, Quantitative Analysis, Statistical Modeling, Selenium, LLM, RDMS, Keras, Cuda, CI/CD
Certifications: SUNY Startup Summer School Class of 2024, JPMorgan Software Engineering Virtual Internship Experience,
Mathematics for Machine Learning, Construct Stock Market Indices, Profit Analysis using Economic Value Added, Git for Developers

PROFESSIONAL EXPERIENCE

Cognitive Network Solutions Inc (CNS), *Machine Learning Ops Engineer* | Ridgefield Park, NJ *Aug 2025 - Present*
- Designed and deployed end-to-end MLOps workflows for 6G wireless optimization graph RL models, reducing model deployment time and improving reliability across production systems
- Built an automated data pipeline processing 100K+ datapoints every 5 min using FastAPI, MCP endpoints, & GCP, enabling real-time model retraining. Containerized and deployed microservices with Docker & Kubernetes, ensuring scalable, fault-tolerant AI systems.
- Developed neural network models for RAN performance prediction and cell tower tilt optimization, enhancing network efficiency
- Collaborated with C-suite to align AI-driven cloud systems with CNS's vision for self-optimizing 6G (AI-RAN) networks

Koffman Southern Tier Incubator, *Founder / Entrepreneur in Residence* | Binghamton, NY *May 2024 – Jun 2025*
- Developed AI-driven storytelling solutions & eco-friendly consumer products, refining business strategies with industry leaders
- Selected for SUNY Startup School '24, completing formal training in business development, fundraising, and commercialization
- Led early-stage ventures, focusing on digital marketing, GTM planning, through market research to validate business concepts

Julius Education, *Machine Learning Engineer* | New York, NY *Jun 2024 – Sept 2024*
- Developed and deployed machine learning models for career dashboards, leveraging AI, RAGs, and prompt engineering techniques to optimize sentence structure for dashboard renewable roles, improving data clarity for green labor seekers
- Led data labeling, web scraping, and cloud storage & tableau integration for government data, ensuring accuracy for analytics
- Collaborated with the **VP** on client projects, such as developing data pipelines (including for NREL) and Google Analytics dashboards

Trust Scout, *Software Engineering Intern* | New York, NY *Jun 2023 – Aug 2023*
- Engineered an automated email marketing system, reducing manual efforts and increasing client replies by **40%**
- Led data analysis on **10M** real estate transactions and **1.6M** agents using statistical modeling, machine learning models, and big data storage, delivering insights that directly improved decision-making and enhanced client relations
- Collaborated with the **Founder/CEO** to optimize business database and marketing workflows, increasing client satisfaction and expanding the sales team by **33.3%**. Tech stack: Python, AWS (S3, EC2), Django, PostgreSQL, APIs, OpenAI

RoboticsForSure, *Software Engineering Intern* | Remote *Jun 2021 – Aug 2021*
- Implemented Robotics Process Automation (RPA) into ML and **C++** projects, automating data preparation phases for clients and reducing processing time by **30%**
- Automated data analysis and math operations, and developed live ML solutions via the Google Cloud and AWS for data extraction

RESEARCH EXPERIENCE

Binghamton University, *Research Assistant – Human-Computer Interaction* *Jan 2024 – Mar 2024*
- Researched ML model integrating computer vision and natural language processing (NLP) to translate real-time ASL into English text
- Improved hand recognition accuracy using neural networks and image processing for more precise ASL interpretation

Binghamton University, *Research Assistant – Semiconductor Fabrication* *Jan 2023 – May 2023*
- Researched ML autoencoder models to develop microscopic filter designs for faster semiconductor manufacturing
- Trained an adversarial model (PyTorch, CUDA) to predict and generate filter shapes based on light transmission across wavelengths

IEEE, Published Research Paper Title '**Fake News Detection Using NLP and Logistic Regression**' *Sept 2021*

PROJECT EXPERIENCE

Zillow Page Summarizer: Chrome Extension Assistant, *Independent Project* (link) *Jul 2024 – Sept 2024*
- Developed an extension that summarizes Zillow property listings, providing real-time insights using web scraping and NLP
- Built the extension's backend using the Flask framework and integrated LLM for sentence processing and APIs for data retrieval
- Tech stack: LLM, Python, Flask, Pyzill, API, HTML/CSS, JavaScript, Chrome Extension Framework, Natural Language Processing

Analyzing Stock Market Sentiment and Price Movements, *Team Project* *Aug 2023 – Dec 2023*
- Built a full-stack predictive model using NLP and stats to analyze social media sentiment and S&P 500 price trends
- Collected Reddit & Yahoo (6k posts, 80k comments), visualized data via Flask dashboard with Matplotlib, deployed using Docker

LEADERSHIP & HONORS

Hackathon (*Secured 2nd out of the 49 teams*) (link) *Jul 2020*
- Led a team of three to develop a '**Fake News Detection Model using Machine Learning and Natural Language Processing**'
- Built an ML model to classify news as "fake" or "real," providing users with verified news, enhancing digital media's reliability