Phillip Huang

US Citizen

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EDUCATION

Master of Science in Computer Science, **University of Southern California** **Aug. 2024 – May 2026 (Expected)**
Relevant Courses: *Artificial Intelligence, Deep Learning, Natural Language Processing, Algorithms* *Los Angeles, CA*

Bachelor of Science in Computer Science, **Rutgers University** **Sep. 2020 – Jan. 2024**
Relevant Courses: *Artificial Intelligence, Deep Learning, Data Structures, Algorithms, Software Engineering* *New Brunswick, NJ*

SKILLS

Programming: Python, Java, C, C++, C#, MATLAB, HTML/CSS, CUDA Programming, GPU Programming
Frameworks: PyTorch, TensorFlow, Numpy, Pandas, Matplotlib, MITRE Caldera
Machine Learning: Natural Language Processing, Prompt Engineering
Key Skills: LLM agent pipelines, NLP pipelines, Model training, Evaluation, Deployment
Languages: English, Mandarin Chinese

WORK EXPERIENCE

NSIP Masters Intern, **Pacific Northwest National Laboratory** | *Richland, WA (Remote)* **May. 2025 – Aug. 2025 (Expected)**

- Streamlined an agentic LLM pipeline that translates natural language instructions into executable cyber-attacks using MITRE Caldera, connecting all components into a true end-to-end system callable via a single terminal command.
- Automated batch testing across folders of synthetic instruction datasets, enabling large-scale benchmarking of the AI agent's full execution cycle in simulated cyber environments.
- Contributed to benchmark design and evaluation of the AI agent: achieved 73% task completion rate and 80% self-evaluation accuracy by testing against scripted ground-truth.

AI Intern, **Sorenson Communications** | *Salt Lake City, UT (Remote)* **Jun. 2024 – Dec. 2024**

- Implemented DistilBERT and Thutmose Tagger to add punctuation/capitalization and inverse text normalization to ASR datasets as baseline accuracy (50%).
- Improved punctuation/capitalization and ITN accuracy from 50% to 65% on ASR datasets using using LLMs (Gemma 2 9B), contributing to faster model post-processing and improved downstream transcription usability.

AI Engineer Intern, **Radical AI** | *New York, NY (Remote)* **Feb. 2024 – May 2024**

- Developed a RAG-based chatbot in Streamlit integrated with Google's Gemini LLM to explore advanced LLM applications.
- Built an AI-generated quiz tool for user-provided PDFs with instant feedback/explanations using Gemini to reinforce understanding.

Software Engineer Intern, **Snail Games USA** | *Culver City, CA (Remote)* **June. 2023 – Aug. 2023**

- Designed 3D computer graphics engines referencing Unreal Engine 5 and Roblox Studio to improve content sharing experiences.
- Developed a first-person shooter and tower defense game on Unreal Engine 5 using Blueprints/C++ to implement gameplay, physics, UI, and NPC AI.

Algorithm Intern, **OmniVision Technologies Inc.** | *Santa Clara, CA* **May 2022 – Aug. 2022**

- Implemented Gaussian blur, sharpen kernels, and demosaic algorithms on Bayer images to improve color reconstruction and reduce artifacts.
- Enhanced image brightness using gamma correction and auto white balance for optimal color presentation.

RESEARCH EXPERIENCE

Graduate Student Researcher, **USC FORTIS Lab** | *Los Angeles, CA* **Apr. 2025 – Present**

- Used AWS Bedrock to prompt a range of hosted LLMs — Meta's Llama 3.2 (1B, 3B, 11B, 90B), Llama 3.0 (8B, 70B), Mistral 2, and Mixtral 2 — for large-scale simulation of political survey responses using persona-driven prompts.
- Executed controlled experiments to test the effects of question order and demographic context on response bias, using LLM personas to simulate realistic human behavior in survey settings.
- Benchmarked model outputs against real human survey data using inconsistency rate as the primary metric, comparing performance across demographic groups (sex, age, education, race, ethnicity, and income).

Undergraduate Student Researcher, **Art and AI Laboratory at Rutgers** | *New Brunswick, NJ* **Jan. 2023 – May 2023**

- Trained and fine-tuned ML models in PyTorch with CUDA acceleration: CNN (92% accuracy), RNN for language detection (45% accuracy), Linear Classifier (41% accuracy).