Harris Chen

harris.chen@columbia.edu ❖ (901) 316-6402 ❖ New York City, NY

EDUCATION

Columbia University **Class of 2026**

Bachelor's Degree, Computer Science and Physics *New York City, NY*

- **Relevant Coursework**: Data Structures and Algorithms, Probability Theory, Advanced Programming (UNIX, C, Systems Programming), Fundamentals of Computer Sys, Machine Learning, Artificial Intelligence, Natural Language Processing

Collierville High School

- GPA: 4.79 / 4.0 | Rank 1% | 18 AP classes | 36 ACT

WORK EXPERIENCE

Growth & Commercial | *Software Engineer & Business Analyst* **Jun. 2024 – Aug. 2024**

- Aggregate and process data from 50+ industry reports using Pandas for data mining/cleaning techniques and build predictive models with scikit-learn to help mitigate and address significant ($10M+) revenue decline within 4 months
- Devise targeted market strategies by mapping revenue and business density using a custom-built web-scraping tool

Vectari | *Machine Learning Engineer Intern* **Apr. 2024 – Aug. 2024**

- Architect neural networks with Ada-2 embeddings in Python to classify 10GB of customer complaints with 84% accuracy and applied K-means clustering and vectorization to enhance targeted customer engagement strategies
- Implemented TensorFlow and BERT-based NLP models, reducing compliance review time and mitigating risk

RESEARCH

Environmental Health Lab, University of Memphis | *Research Intern* **Oct. 2020 – Mar. 2023**

- Conducted research under the guidance of Professor Chunrong Jia on dispersion of VOCs in the vicinity of a landfill, applying Monte Carlo simulations and supervised learning techniques, including random forests, to enhance prediction accuracy; integrated GIS data with Google Earth's API to optimize adaptive decision-making in satellite imagery analysis

Yale Summer Program in Astrophysics | *Research Intern* **Jun. 2022 – Aug. 2022**

- Synthesized observational astronomy, CCD photometric imaging, and stellar evolution principles/dynamics, utilizing SAO DS9, AstroimageJ, and Python libraries (numpy, astropy, etc) to refine research data quality and methodology robustness
- Authored research paper and presented findings to Yale faculty, submitting results to Minor Planet Center and AAVSO

ACTIVITIES & PROJECTS

Columbia Space Initiative | *Member* **Sep. 2023 – Present**

- Integrate F Prime into LIONESS CubeSat's software, enhancing the satellite's command systems via algorithmic strategies
- Engineer wearable AR interface for extravehicular suits, leveraging Unity and C# to synthesize and render real-time biometric, navigational, and environmental data into a visual overlay, enhancing astronaut situational awareness/efficiency

Grouptinerary | *Columbia DivHacks Project* **Sep. 2024**

- Developed web application with React, Node.js, and Express, integrating OpenAI's API to synthesize group travel preferences and dynamically generate customized itineraries based on budget, accommodations, transportation, etc.

Alliance of Youth Leaders | *Memphis Chapter Founder & President* **Jul. 2020 – Jul. 2023**

- Partnered with hospitals, libraries, and schools to create tech-driven initiatives, such as coding workshops, digital literacy programs, and data analysis projects, engaging 80+ members in 150+ initiatives; raised $17k+ & received media coverage.
- Coordinated and organized seminars and events, facilitating knowledge-sharing, networking, and professional growth

Hackathons: Columbia DivHacks, Hack@Brown, HackPrinceton

CERTIFICATIONS, AWARDS, SKILLS, & INTERESTS

- **Certifications:** The TestOut PC Pro and Network Pro certifications tests knowledge related to hardware and software
- **Awards:** 2x US National Chem Olympiad Finalist, Science Olympiad National Finalist, Science Bowl National Finalist
- **Skills:** Python (NumPy, pandas, scikit-learn), Java, C, TensorFlow, HTML/CSS, Git, UNIX, React, Node.js, Django
- **Interests:** Astrophotography, origami, stargazing, trivia, music, trading