ANDREW ZHENG

410-852-2128 | azheng15@terpmail.umd.edu | jandrewzheng.github.io

SUMMARY

- Formal coursework in computer science, mathematics, and physics
- Experience in Machine Learning and Artificial Intelligence
- Experience in teaching in classroom and one-on-one settings

EDUCATION

University of Maryland | College Park, MD   Jan 2021 – Expected: May 2024
B.S. in Computer Science and B.S in Mathematics   *GPA: 3.71/4.0*

SKILL HIGHLIGHTS

Programming Languages: Python, Java, C
Computer Science: Object-Oriented Programming, Machine Learning, Data Science, Quantum Computing
Mathematics: PDEs, Real Analysis, Numerical Methods, Statistics, Advanced Linear Algebra
Software: Pandas, Scikit-learn, Pytorch, Unix Shell Script, Jira, Confluence

RESEARCH AND PUBLICATIONS

Localized Chat Bot | *Natural Language Processing, Generative AI*   Current
- Trained a Generative AI chat bot model to improve customer experience

DiffuserCam | *Computer Vision, Python, Numerical Methods*   Current
- Helped examine code involving reproducing images from a lenseless camera
- Used compressed sensing to generate 3D images from 2D input

2D Image Generation | *Computer Vision, Python, Machine Learning*   Current
- Researched innovative methods concerning generating 2D frames accurately
- Used Implicit Neural Representations to train a model that accurately fitted an image

Binning Techniques for Solar Wind and Geomagnetic Data | *Machine Learning, Poster Presentation* Dec 2018
- Presented a poster during the AGU conference held on December 12th, 2018 in Washington, D.C. titled "SM31D-3525 Effects of Data Binning Techniques on Results of Analyzing Solar Wind and Geomagnetic Indices Data" [Link]

WORK EXPERIENCE

ITS Intern | AARP Washington DC Headquarters   May 2023 – August 2023
Generative AI

- Led innovation for chat bot prototype creation
- Used pandas to conduct data analysis to create direction for project
- Utilized understanding in numerical methods to create multiple chat bot prototypes

Teaching Assistant | University of Maryland, College Park, MD   Jan 2023 – May 2023
CMSC 250: Discrete Structures

- Led a discussion section that went over course material
- Office hours and grading duties
- Created original discussion slides to complement lecture material [Link]

Kumon Math and Reading Center of Clarksville | Clarksville, MD   Jun 2020 – August 2021
Kumon Math and Reading Tutor

- Taught Advanced English Literature and mathematics up to Calculus II

NASA Goddard Space Flight Center | Greenbelt, Maryland   Jun 2018 – May 2020
Data Analysis Internship
- Research with NASA's STEM ARE
- Used machine learning to find correlations between solar wind parameters
- Utilized skills in Python, data analysis, and project management

Coursework

Completed: Advanced Linear Algebra (MATH405); Computational Methods (AMSC460); Complex Analysis (MATH463); Abstract Algebra (MATH403); Number Theory (MATH406); Differential Equations (MATH246); Introduction to Linear Algebra (MATH240); Introduction to Quantum Computing(CMSC457) Special Topics in Computer Science; Quantum Boot Camp (CMSC488A); Advanced Data Structures (CMSC420); Algorithms (CMSC351); Introduction to Data Science (CMSC320); Applied Probability and Statistics I (STAT400)

In Progress: Introduction to Machine Learning (CMSC422); Computer Vision (CMSC426); Real Analysis (MATH410); PDE's (MATH462); MATH416 (Fourier)