Xinyu(Xiyah) Chang

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EDUCATION

Johns Hopkins University   **Baltimore, MD**
Master of **S**cience in **E**ngineering, **D**ata **S**cience GPA: 3.90/4.00 (Estimated)   *August 2023 - May 2025 (Expected)*

University of Washington   **Seattle, WA**
Bachelor of **A**rt in **Econ**omics, **Math**ematics, minor in Data Science GPA: 3.60/4.00   *August 2019 - June 2023*

Coursework: Machine Learning, Natural Language Processing, Data Visualization, Algorithm, Database, Artificial Intelligence
Honors: Department Scholarship, Annual Dean's List, Education Data Prediction Model Competition 2nd Place

WORK EXPERIENCE

Intellimpact LLC   **Dallas, TX**
Data Analyst Intern   *August 2023 - October 2023*
- Mitigated project delays and ensured data uniqueness by rectifying overlooked duplicate entries using elimination commands.
- Discovered open rate improvement prospects through A/B testing, with anticipated 10% increase via subject line verbiage changes and 5% boost through email sending window optimization.

PROJECTS

Music Emotion Recognition Using Neural Networks and Artificial Bee Colony Algorithm   *January 2024 – Current*
- Managed project to enhance music recommendations and therapeutic use by converting 900 30-seconds audio clips into feature vectors with Python libraries.
- Curated audio datasets from research and optimized Neural Networks for accurate emotion tag prediction based on Russell's Emotional Quadrant.

Model Selection for Online Course Participation   *March 2022 – June 2022*
- Streamlined data cleansing for 10k education dataset by feature selection and missing value handling, leading test accuracy increased from 0.8 to 0.98 for all Neural Networks, Random Forest, and K-Nearest Neighbors models.

Vaccine Schedular Database   *October 2021 - December 2021*
- Performed SQL operations to add, search, modify, and delete patient appointment information, troubleshooting the integration of the databased with the user interface through collaborative discussions with Teaching Assistants (TAs).

RESEARCH EXPERIENCE

Comparative Analysis of Neural Network Architectures for Geometric Data   **Johns Hopkins University**
Research Assistant, Mentor: Dr. Soledad, Villar   *January 2024 – Current*
- Executed a computational comparison between Equivariant Neural Networks and Euclidean Neural Networks (E(3)NN), focusing on their efficacy in learning from 1000 sample data with inherent symmetries, specifically on the SO(3) group.

Deep Neural Networks for Estimation and Inference   **University of Washington**
Research Assistant, Mentor: Professor Jing, Tao   *July 2022 - September 2022*
- Tackled challenge of deriving parameters for generating treatment variables while replicated and rewrote code using PyTorch.
- Reduced bias by 88% with greater number of weights on Neural Network layers while scaling data volume from 10k to 100k.

LEADERSHIP AND VOLUNTEERS

Hainan Yuanheng Xinshi International Trade Co.   **Harbin, China**
Manager Assistant   *June 2023 - August 2023*
- Manifested quick learning and organization skills by assisting manager in establishing various global businesses' frameworks.

Xiaomi   **North America Region**
Campus Ambassador   *March 2021 - December 2021*
- Demonstrated leadership and proactive problem-solving mindset by successfully overseeing 30 chapters and organizing annual recruitments, engaging audience of over 2200, all accomplished despite a lack of prior experience or knowledge in the field.

SKILLS

Programming Language, Statistical Tools, Visualization Tools

- Python, R, SQL
- Numpy, PyTorch, Pandas, Sklearn
- Microsoft Word, Excel, Powerpoint
- LaTeX, Git

- Regression Model
- ANOVA, T T-test, F-test
- Recurrent Neural Networks
- Byte-Pair-Embedding Tokenization

- Transformers
- Python Matplotlib
- R ggplot, plotly
- PowerBI, Tableau