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Lingshu FANG

Portfolio Webpage
GitHub
LinkedIn

EDUCATION

National University of Singapore   **Aug. 2023 - Jul. 2025**
- Master of Science in Mathematics
- **Core Courses**: Mathematical Modeling, Game Theory, Numerical Analysis, Machine Learning, Financial Mathematics

The Chinese University of Hong Kong, Shenzhen   **Sep. 2019 - Jul. 2023**
- Bachelor of Science in Applied Mathematics, **First Class Honor**
- **Core Courses**: Calculus, Linear Algebra, Real Analysis, Complex Analysis, ODE, Statistics and Probability, Optimization

University of California, Berkeley   **Aug. 2021 - Dec. 2021**
- GLOBE Program, one-semester visiting student
- **Core Courses**: Analysis and Topology, PDE, Abstract Algebra

INTERNSHIPS

Teaching Assistant   **Aug. 2024 - Dec. 2024**
At University of Chinese Academy of Sciences, Chongqing
- **AIGC Tool Integration:** Researched and implemented AI-Generated Content (AIGC) tools (e.g., GPT-3, MidJourney) to build a student portfolio website using Cursor (AI-powered IDE), enhancing project visibility for 50+ students;
- **Curriculum Design:** Developed AI education curricula for 200+ college and middle school students, teaching UI game development (e.g., Flappy Bird) with PyGame and Cursor.
- **Patent Writing:** Authored patent applications for Applications of Computer Vision (CV) and drones in monitoring natural conservatives.

EXTRA-CURRICULUM ACTIVITIES

Literature Essay Publish   **Jan. 2021**
- Co-authored "Welcoming Ambiguity in English Language?", a literature essay analyzing Shakespear's theatre play lines, with Professor Michael Salter, published in Shaw College (a college belonging to CUHKSZ) Magazine.

Python Project: CE Camp Mini-Project | Third Prize Winner   **Aug. 2020 - Aug. 2020**
- Led a 4-member team to build an interactive Python-based Snake Game using Turtle;
- Implemented features like score tracking, moving monsters, and GUI design.

Public WeChat Account Manager   **Sep. 2019 - Aug. 2020**
Art editor and activity organizer of Leadygo Entrepreneurial Team
- Authored and Edited over 20 weekly posts, leveraging tools like XIUMI, Canva and Photoshop;
- Organized and promoted campus activities on career planning and Study-Partner program, gaining more than 1000 freshmen participants.
- Trained and mentored 4 interns in editorial workflows and graphic design, improving content output efficiency.

PROJECTS

Machine Learning: Heart Disease Prediction | Graduate Course Final Project (Grade: A)   **Aug. 2023 - Dec. 2023**
- Analyzed UCI Heart Disease Database (303 records, 13 features) using Python (Pandas, Scikit-learn); performed data cleaning (addressed 2% missing data via imputation) and visualization (heatmaps, correlation matrices with Seaborn).
- Engineered supervised models (Logistic Regression, Random Forest) achieving 60% cross-validation accuracy (considered the under-sampled imbalanced dataset);
- Applied PCA to study the most likely predictors of heart disease. PCAed data reduce dimensionality by 50%, improving neural network efficiency;

Deep Learning and NLP   **Jun. 2022 - Present**
- Completed online course: *Natural Language Processing with Classification and Vector Spaces* on DeepLearning.AI
- Participate in Kaggle Deep Learning project: Predict Weather Type, (GitHub Code) Adapted neural network to the classification and obtained F1 score 0.895.
- Participate in Kaggle NLP Project: Disaster Tweets Detect, (Kaggle Notebook) Fine-tuned BERT to classify disaster-related tweets, F1 score achieving the benchmark 0.78.

Online Courses: Data Analysis with SQL   **Jan. 2022 - Present**
- SQL for Data Science, University of California, Davis
- SQL Programming & Data Science with Python (Pandas), Datawhale

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Volunteering Activities

Shibanzhen Government, Chongqing   **Jul. 2022 - Aug. 2022**
- Helped prevent forest fire in remote villages
- Inspected the biggest local cold chain company and seafood market for epidemic control

Skills

Technical Skills Python, PyTorch, MATLAB, SQL, LATEX, Microsoft Office, Photoshop
Language Proficiency Mandarin (Native), English (Fluent), Korean (Intermediate), Japanese (Intermediate)
Certification Publishing Professional Technician Qualification Certificate (Level 1)