Thong Minh Lai (Tom)

+44 (0)7746722114 | laiminhthong1@gmail.com

thong-lai | ThongLai | Personal Website | Kaggle

Huddersfield, United Kingdom

Objective

Enthusiastic and skilled in AI, Machine Learning, Deep Learning, Neural Networks, and various models and domains, with 2 years of experience in Python, C++ and Octave (MATLAB). I am seeking opportunities to leverage my expertise and contribute to innovative projects in AI and practical problem-solving in related fields

Skills

- **Programming Languages:** Python, C++, Java, MATLAB/Octave
- **AI & Machine Learning:** Neural Networks, Deep Learning, Computer Vision, NLP, YOLOv9, Support Vector Classification (SVC)
- **Data Science & Analytics:** Descriptive Statistics, EDA, PCA, Outlier Detection, Data Visualization (Matplotlib, Seaborn, Tableau)
- **Machine Learning Libraries:** TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas
- **Cloud & Development Tools:** AWS, Azure, Git, GitHub, Docker
- **Database Systems:** SQL, Relational Databases, Database Management Systems
- **Web Development:** HTML5, CSS3, JavaScript, React.js, Node.js, Bootstrap, MongoDB, Django, Flask, Responsive Design, Web Security, API Integration, Git/GitHub Pages, AWS Deployment
- **Mathematical Foundations:** Linear Algebra, Calculus, Statistics, Probabilities, Discrete Mathematics
- **Research Skills:** Data Analysis, Academic Writing, Literature Review, Scientific Documentation
- **Soft Skills:** Leadership, Project Management, Team Collaboration, Problem Solving

Experience

- **Learnspot** *June 2024 - September 2024*
  AI Software Engineer - Summer Intern Hybrid - London
  - Designed and implemented a customer service Chatbot using Prompt Engineering with the OpenAI API
  - Integrated the Moderation API to ensure safe and appropriate interactions
  - Employed Chain-of-Thought prompting to enhance the chatbot's reasoning capabilities
  - Implemented evaluation techniques to minimize response leakage and hallucination
  - Developed an AI tutor chat feature to assist students with their questions and assignments, providing real-time support and guidance

Education

- **University of Huddersfield** *September 2022 - Present*
  BSc (Hons) Computer Science with Artificial Intelligence SW Huddersfield, United Kingdom
  - First-year Overall Grade: 93.125% | Second-year Overall Grade: 92.8%
  - Key Modules: Computer Network Fundamentals (100%), Introduction to AI (93%), Algorithm and Data Structures (94%), Computational Mathematics (100%)
- **Ho Chi Minh University of Science - Vietnam National University** *October 2020 - September 2022*
  BSc Information Technology Ho Chi Minh City, Vietnam
  - GPA: 3.7/4.0
  - Received Honor Scholarship for Excellent Academic Student

Publications and Technical Reports

T=Technical Report, P=Project Proposal

[P.1] Lai, M. T. (2025). **Explainable AI (XAI) in Deep Learning Models for Credit Card Fraud Detection**. Project Thesis, University of Huddersfield. Supervisor: Prof. Hyunkook Lee

[T.2] Lai, M. T. (2025). **Parallel Computer Architecture Clusters and Grids Benchmarking**. Technical Report, University of Huddersfield. Supervisor: Prof. Hamza Aagela

[T.1] Lai, M. T. (2024). **LearnSpot: Implementing Advanced Prompting Techniques for AI Chat Systems**. Technical Report, Learnspot AI

[T.2] Lai, M. T. (2024). **Investment Allocation Analysis: A Machine Learning Approach**. Technical Report, McGill-FIAM Asset Management Hackathon

Projects

- **Explainable AI (XAI) in Deep Learning Models for Credit Card Fraud Detection** *October 2024 - Present*
  Tools: Deep Learning, SHAP, LIME, Anchors, TensorFlow, Scikit-learn [Supervisor: Prof. Hyunkook Lee] [GitHub]
  [Academic Poster]
  - Integrated XAI methods (SHAP, LIME, Anchors) to provide explanations for Deep Learning model predictions.
  - Evaluated explainability using XAI metrics (Faithfulness, Monotonicity, and Completeness) in confidence levels.
  - Compared XAI outputs across models (CNN, LSTM) to identify strengths and limitations for different user needs.
  - Delivered actionable explanations to support regulatory compliance and stakeholder trust in AI-driven decisions.
- **McGill-FIAM Asset Management Hackathon: Investment Allocation** *September 2024 - October 2024*
  Tools: Machine Learning, Big Data Analytics, Financial Analysis [GitHub]
  - Collaborated with finance specialists as Machine Learning Specialist to develop portfolio trading strategies
  - Implemented ML methods for portfolio optimization and stock selection
  - Developed models to identify key financial factors for stock performance prediction
  - Conducted back-testing to validate portfolio performance using historical data
  - Our strategy delivered over 7500% return from 2010 to 2024, far surpassing the S&P 500
- **Work It: Exercise Recommender System** *January 2024 - Present*
  Tools: Filtering Collaboration, Web Development, User Feedback Analysis [GitHub]
  - Developed recommender system using Filtering Collaboration to suggest 10 personalized exercises
  - Implemented online batch updates for continuous model improvement based on user feedback
  - Integrated PLESI considerations for privacy, legal compliance, and inclusivity
  - Designed system architecture focusing on gender-inclusive exercise recommendations
- **Eye-tracking in Reading Comprehension: Anomaly Detection** *October 2023 - December 2023*
  Tools: Local Outlier Factor (LOF), Data Analysis, Python [Reference] [GitHub]
  - Developed Anomaly Detection mechanism using Local Outlier Factor for eye-tracking dataset
  - Analysed 20+ features related to readers' eye movements, fixations, and directions
  - Support PhD researcher Minh Huyen Nguyen to categorize fixations into "First Pass" and "Second Pass" sequences
  - Improved 11.25% data analysis accuracy through systematic outlier removal and feature engineering

Honours and Awards

- **Outstanding Leadership Award** *February 2023*
  University of Huddersfield International Office
  - Led and managed the Vietnamese Society as President, demonstrating exceptional leadership skills
  - Successfully managed social media platforms achieving 2.2k+ Facebook likes and active Instagram engagement
  - Recognised by International Office for impactful community leadership and cultural integration initiatives [Web]
- **Academic Excellence Awards** *2022 - 2024*
  University of Huddersfield
  - Maintained an overall grade of over 92% in both years
  - Achieved perfect scores (100%) in Computer Network Fundamentals and Computational Mathematics
  - Received Merit-based Scholarship for Outstanding Academic Performance [Web]
- **Professional Certifications** *2023 - 2024*
  DeepLearning.AI, IBM, Stanford University
  - Completed Deep Learning Specialization and NLP Specialization from DeepLearning.AI [Web]
  - Earned Cloud Computing certification from IBM [Web]
  - Completed Writing in the Sciences course from Stanford University [Web]
- **Previous Academic Achievements** *2020 - 2022*
  Ho Chi Minh University of Science & High School
  - Received Honor Scholarship for Excellent Academic Student at HCMUS
  - Bronze Medal in Mathematics at Excellent Student Olympic Competition
  - Demonstrated exceptional problem-solving skills in competitive mathematics

Additional Information

Languages: English (Professional), Vietnamese (Native), Chinese (Basic)
Technical Writing: Scientific documentation, research papers, technical blogs
Interests:

- Any AI Fields: Fraud Detection, Computer Vision, Natural Language Processing, Generative AI
- Financial Technology: Investment Analysis, Trading Strategies
- Cultural Exchange: International student community, cross-cultural communication
- Sports: Badminton (Captain of University Badminton Team)

Personal Website: Portfolio and Technical Blog

REFERENCES

1. **Prof. Hyunkook Lee**
   Professor of Music Technology
   Department of Computing and Engineering
   University of Huddersfield
   Email: H.Lee@hud.ac.uk
   Relationship: Final Year Project Supervisor

2. **Dr. Ilias Tachmazidis**
   Senior Lecturer
   Department of Computing and Engineering
   University of Huddersfield
   Email: I.Tachmazidis@hud.ac.uk
   Relationship: Academic Advisor

3. **Dr. Muhammad Ansari**
   Senior Lecturer
   Department of Computing and Engineering
   University of Huddersfield
   Email: m.a.ansari@hud.ac.uk
   Relationship: Course Lecturer

4. **Dr. Dinh Ba Tien**
   Senior Lecturer
   Faculty of Information Technology
   Ho Chi Minh University of Science
   Email: dbtien@fit.hcmus.edu.vn
   Relationship: Former Academic Advisor

Additional references available upon request.