Ethan Luong

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Looking for a 6 months AI / Data Science Internship starting from February 2025

Work Experience

ISIR - Institute of Intelligent Systems and Robotics — Paris, France
Research Intern — Summer 2024

- Subspaces of Policies in Reinforcement Learning

Hexagon Manufacturing Intelligence — Montoire, France
Research & Development Intern — Summer 2023

- Analyzed about a thousand Coordinate Measuring Machines (CMMs) to correlate length measurement errors with external factors such as the temperature
- Designed a Python script to visualize the performances of multiple compensation methods in order to compare them to Hexagon's
- Studied the ISO norm for scanners to specify and ensure the validity of the whole scanners calibration process
- Made a state-of-the-art of CMM calibration improvements by backpropagation neural networks

Sorbonne University — Paris, France
Computer Science Tutor — 2022-2023

- Tutored Sorbonne University freshmen in Python during the first semester
- Taught them C basics during the second semester

SMA — Paris, France
Information Technology Intern — August 2022

- Solved employees' hardware and software issues

Education

Sorbonne University — Paris, France
Master of Science in AI and Data Science — 2023-2025

Sorbonne University — Paris, France
Bachelor of Science, Computer Science Major, Mathematics Minor — 2021-2023
Valedictorian, Cumulative GPA: 4.0

Lycée Condorcet — Paris, France
Preparatory School, MPSI, MP* — 2019-2021
Optional language: Spanish, Cumulative GPA: 3.0

Project & Research Experience

Sorbonne University — Spring 2024
Conversational Systems for Information Retrieval

- Made a State-of-the-Art of Conversational Informational Retrieval
- The context of this work is the TREC CAsT campaign
- Study of the CoSPLADE model

Sorbonne University — Spring 2024
DIY Neural Network Library

- Python library for lightweight deep learning

- The main features encompass linear layers, activation functions, multiclassification, convolutions, ...

Sorbonne University   Spring 2024
Study of Popular Books
- Performed statistical analyses on scraped data
- Developed prediction tools for popular books' prices, format, genres, and language
- Books clustering and groups' main characteristics interpretation

Sorbonne University   Spring 2023
Scalability for Swimmer with N Bodies
- Programmed a script aiming to install a library called bbrl and Gym's swimmer environment
- Adapted Reinforcement Learning (RL) algorithms From bbrl for hyperparameters tuning
- Studied the results due to an increase in number of bodies of the agent, on the mean rewards

Sorbonne University   Spring 2023
Cosmose
- Developed a Twitter clone that allows to: create an account, publish and retweet messages, follow other users
- Used `jwt` tokens to handle sessions, and `bcrypt` to hash the users' passwords
- Technologies used: React, Express.js, MongoDB

Sorbonne University   Winter 2022
WireLinks
- Python app, greatly inspired by WireShark, that is able to examine a file of network frames and export their data in a pdf document
- The data is displayed so that users are reminded of the Flow Chart option in WireShark
- Multiple protocols are supported such as IPv4, IPv6, TCP, UDP, ...

Skills

Computer Science: Algorithmics, Data Science, Data Structures, Database Optimization, Deep Learning, Digital Image Processing, Image Processing, Information Retrieval, Logic and Knowledge Modeling, Machine Learning, Natural Language Processing, Operations Research (linear programming and graphs), Relational Databases, Signal Processing, Web Technologies

Mathematics: Algebra and Arithmetics, Differential Equations, Linear and Bilinear Algebra, Probabilities, Sequences and Series of Functions, Statistics, Topology

Programming: C, CSS3, Django, Express.js, Git, HTML5, Java, JavaScript, LaTeX, MATLAB, MIPS Assembly, Next.js, OCaml, Python (pandas, scikit-learn, PyTorch), React, SQL3

Languages: Fluent in English and in French, Limited Proficiency in Spanish and German, Beginner in Chinese and Japanese