

Xuanlang ZHAO

[in linkedin.com/in/xuanlang](https://www.linkedin.com/in/xuanlang) github.com/1982606762
+45 52612597 @ xuanlang.zhao@icloud.com
Rebæk Søpark, 2650 Hvidovre

I have completed my Master's degree in Computer Science from the University of Copenhagen and have two years of experience in full-stack development. With several years of experience in object-oriented languages and plenty of experience in AI agents, I always try to address challenges with the best possible solution. I am learning Danish and planning to settle here in the long term.

SKILLS

Programming languages	Python, JavaScript, C++, C#, CSS, SQL, Haskell, Erlang, Swift, node.js
Programming tools	Unity, Git, Docker, React, Svelt
Data base	PostgreSQL, MySQL, SQLite
Algorithms	Machine Learning (Linear regression, Logistic regression, decision tree, KNN), computational geometry (shortest path in simple polygon, shortest path in three dimensions), NP Complete, Randomized Algorithms, Approximation Algorithms
Others	Claude Code, AI Agent
Operating systems	Mac OS, Windows Server, Red Hat Enterprise Linux, Centos
Languages	English, Chinese, Danish, French

EDUCATION

June 2024 September 2022	M.S. in Computer Science, University of Copenhagen, Copenhagen <ul style="list-style-type: none">Master's thesis on shortest path in three dimensions, reviewed several papers and explained three algorithms in my paper: approximate algorithm in three dimensions, L_1 shortest path on terrain and shortest path in stacked obstacles.Used Python in Signal and Image Processing course and learned several image processing skills. e.g. Fourier transform, Image histograms, Image segmentation.Learned basic algorithms in Machine Learning course. e.g. KNN, PCA, Linear Regression, k-means <p>Machine Learning Functional Programming Python Recommend System Algorithm</p>
June 2022 September 2018	B.S. in Computer Science, Hebei University of Technology, Tianjin China <ul style="list-style-type: none">GPA 3.7/4.0. Average score 90/100Selected Courses: python, HTML, C language, data structure, operating system, database fundamentalsCollege Second-class scholarship (2021-2022) <p>C C++ Data Structure Windows Server PHP Compilation Principles JavaScript</p>

WORK EXPERIENCE

Now October 2024	Full-Stack Developer, Windar Photonics, Ishøj <p>I am the developer of the Nexus system, a full-stack web application for LiDAR tracking.</p> <ul style="list-style-type: none">Built and maintain the application end-to-end — Django / Django REST Framework backend, React frontend, and a PostgreSQL data model.Introduced AI-assisted development workflows with Claude Code to colleagues.Extended the Django stack from WSGI to an ASGI (Daphne) server to add WebSocket support, enabling real-time data push to a more responsive frontend.Implemented asynchronous background processing with Celery and Redis for long-running tasks such as report generation and data gathering.Designed REST APIs and refactored legacy code into a modular, scalable structure, improving maintainability and easing feature development.Set up automated tests with pytest, run on every push via a GitLab CI runner.Rebuilt the legacy UI into a new React frontend, with data visualization driven by backend SQL queries and ECharts. <p>Python Django Celery Redis PostgreSQL React TypeScript</p>
---------------------	---

- December 2023** | **Programmer, The National Academy of Digital Interactive Entertainment(DADIU), Copenhagen**
- August 2023** | I worked with a team of 16 students on a game-developing project. We built a mini-game, "Turtle Run", and then made a game "I inherited a Castle".
- > In charge of core game logic for a game-developing project
 - > Implement several different mechanics using c# and Unity
 - > Use wwise to implement music, menu sound and footstepsound
 - > Use Plastic SCM to do version control
 - > Collaborated with my teammates from different departments with various backgrounds
- Unity c# Plastic SCM wwise communication
- June 2022** | **Quality Engineering intern, RedHat, Beijing**
- December 2021** | I did tests on RHEL and made test functions.
- > ran automated tests on multiple platforms and verified several bugs' existence.
 - > Discovered and reported two new bugs on RHEL-8 and RHEL-9.
 - > Add several new test cases for our group's automated testing tool.
 - > Made several documents for old test cases.
- Linux bash Python Github Fedora RHEL
- August 2021** | **Front-end Intern, Sichuan Energy Internet Research Institute of Tsinghua University, Tianjin**
- August 2020** | I was in charge of the GUI part of a web-based software.
- > Developed a GUI with similar functionality and design to professional software such as PSCAD.
 - > Designed and created most exterior elements and upgraded the system with Bootstrap.
 - > Performed extensive code refactoring, resulting in a more flexible and scalable codebase.
 - > Used GitHub for code merging.
- HTML CSS JavaScript Bootstrap Git jQuery

PROJECT EXPERIENCE

Self-Hosted Portfolio Tracker

2026

[Demo Link](#)

A single-user portfolio analytics platform for Saxo users, built to replace Sharesight or Delta with broker-exact accuracy.

- > Designed an immutable, append-only transaction as the single source of truth; cash, holdings, cost basis, and market value are all derived from transactions.
- > Implemented point-in-time replay — reconstructing the full portfolio state as of any past date — which powers performance and trade-quality analytics.
- > Built a commission-inclusive FIFO cost-basis engine and a three-layer multi-currency model (instrument / account / reporting), reconciled to the broker to the cent.
- > Implemented FX attribution, decomposing every gain into a price component and a currency component.
- > Backend in Django / DRF / PostgreSQL, frontend in React / TypeScript, self-hosted on a VPS.

Python Django DRF PostgreSQL React TypeScript

Agentic RAG Knowledge System

2026

[Demo Link](#)

A self-hosted retrieval-augmented system with an agentic tool-calling loop over a private document corpus.

- > Built the ingestion and retrieval pipeline with ChromaDB and BGE-M3 embeddings.
- > Implemented an agentic loop where the model plans and calls tools to answer multi-step queries.
- > Backend in FastAPI / Celery / PostgreSQL, Frontend in React and Typescript.

Python FastAPI Celery PostgreSQL ChromaDB LLM/RAG

Shortest Path in Three Dimensions

2024

[Paper Link](#)

I wrote my thesis by discussing three different algorithms to solve the shortest path problem under the supervision of Mikkel Abrahamsen.

- > Discuss a polynomial approximation algorithm that can give an approximated optimal result in polynomial time.
- > Discuss an algorithm for "L₁-shortest path above a terrain" problem
- > Discuss a polynomial-time algorithm for the shortest path in stacked obstacles
- > Present some new proof that was not discussed in the original paper.
- > Include additional details and annotations to help the reader understand these three complex algorithms.

Algorithm

Hexo Self Website

2019 - NOW

[Self website\(In Chinese\)](#)

My self website to store my learning notes.

- > Use Hexo to build my website, host it on GitHub Pages and customize domain.
- > Use bash scripts and python scripts to help write new blogs
- > Use both image hosting services and localhost to store images
- > Use CDN to speed up the site speed
- > Use alias to add functionalities to make operation more convenient and use node.js to open the blog file at the time it's created

[Hexo](#) [DNS](#) [Github](#) [bash](#) [node.js](#) [cloud service](#)

Parallel Stock Exchange System "Erlst"

2022

github.com/1982606762/Erlst

A parallel stock exchange system that can allow users to open accounts, make offers and trade with other users.

- > Use Erlang to implement the system
- > Design the main status used in the system
- > Use gen_server to implement the system
- > Use eqc QuickCheck to generate test cases and test the system automatically.

[Erlang](#) [eqc QuickCheck](#)