Thomas Chen

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EDUCATION

New York University - B.A in Mathematics and Computer Science **May 2025**

Coursework: Algorithms, Computer Architecture, Machine Learning, Data Structures, Operating Systems, Natural Language Processing, Computer Graphics

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SKILLS

Programming Languages: Java, C/C++, Python, JavaScript, Julia, MySQL, Linux/Unix
Frameworks: React, Flask, Node.js, SpringBoot, Vue.js, HTML, CSS
Database/Developer Tools: Git, Svn, Docker, VS Code, Trae, MongoDB

INTERNSHIP EXPERIENCE

Software Engineering Intern - 666 Life, Ningbo, China **May 2023 - July 2023**

- Contributed to game development for, "Count Money," published on the Chinese Tiktok platform
- Implemented backend functionalities using **SpringBoot** framework of the **Java** Language
- Developed web service using **Vue.js** in the frontend to retrieve data from the database
- Facilitated communication with Game Development team to achieve goals set by the company mentor

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RESEARCH EXPERIENCE

Research Assistant - New York University, New York, NY **May 2024 - Present**

- Conduct research project on utilizing interval arithmetic in root finding within 2-dimensions and above under the supervision of Doctor Yap Chee
- Employ the **Julia** Coding language for efficient mathematical computing
- Organize regular progress report meetings with Doctor Yap and incorporated feedback

Research Assistant - New York University Abu Dhabi, Abu Dhabi, UAE **Jan 2024 - May 2024**

- Conducted research project on Deadcode Remover web extension under the supervision of Professor Yasir Zaki
- Implemented the extension using **Javascript** to improve webpage efficiency by removing unnecessary code
- Facilitated communications with Professor Yasir on specifications and successfully executed suggestions

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WORK EXPERIENCE

Full-time Summer Research Assistant - New York University, New York, NY **June 2025 - Present**

- Developed a novel range-function computation algorithm, achieving a 2x speedup over the traditional Taylor-series method.
- Implemented a Straight-Line Program (SLP) auto-differentiation engine for highly efficient derivative calculations.
- Reconstructed polynomials via isotopic‑curve extraction and produced detailed visualizations of the results.
- Collaborated closely with Dr. Yap Chee, Prof. Kai Hormann, and Postdoc Bingwei Zhang through weekly strategy and review meetings.

PROJECTS

MarketMentors

- Modern, AI-powered platform that transforms the overwhelming world of financial news into clear, actionable insights.
- Utilized **Python Flask** Backend, leveraging **OpenAI** models for summarization, topic extraction, and prediction.
- Built a responsive and interactive frontend with **React** and **TypeScript**, enabling seamless user experiences with real-time financial data visualization and personalized insight delivery.
- Selected as a finalist at Hacktech 2025 (Caltech), one of the nation's premier collegiate hackathons, for innovation and technical excellence in financial technology.