Yunxiang Yan
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Education

- **Georgia Institute of Technology, College of Computing** — Atlanta, GA
  MS in Computational Science and Engineering; Home unit: College of Computing — *Aug. 2023 – Jun. 2025*
- **Southern University of Science and Technology, Department of Finance** — Shenzhen, China
  BEc in Financial Engineering; CGPA: 3.6 / 4.0 — *Sept. 2019 – Jun. 2023*
- **University of Notre Dame, Department of Computer Science and Engineering** — Notre Dame, IN
  Exchange Student; CGPA: 3.9 / 4.0 — *Aug. 2021 – May. 2022*

Experience

- **Ricequant** — Shenzhen, China
  Quantitative Researcher Intern — *Mar. 2023 - Present*
  - **Content**: Conducting research on multivariate time series prediction problems with modified Time Series Attention Transformer model (TSAT). Developing efficient infrastructure to train and fine-tune a large scale TSAT model in Tencent cloud server.
  - **Tech Stack**: Pytorch, Cloud Computing, NumPy
- **Southern University of Science and Technology** — Shenzhen, China
  Teaching Assistant for CS209 Computer System Design and Applications — *Feb. 2023 - Jun. 2023*
  - **Content**: Developed automatic Java code style checking tool for Github project. Designed and graded coding assignments. Provided tutorship for students during lab sessions.
- **Data Mining towards Decision Making Lab** — Notre Dame, IN
  Undergraduate Researcher, Supervised by Dr. Meng Jiang — *Aug. 2021 - Aug. 2022*
  - **Efficient Methods to Sample from Large Graphs**: Designed a new framework to sample from large graphs while preserving several graph properties including degree distributions. Theoretical portion constitutes the paper accepted by SIGKDD 2022 UC. Link to paper: https://kdd.org/kdd2022/papers/24_Yunxiang%20Yan.pdf
  - **Graph Anomaly Detection on Large Social Networks**: Analyzed the degree distribution anomalies in Twitter and Tencent Weibo datasets. Conducted experiments to justify the origins of the anomalies.

Projects

- **Online Forum (Java)**: Course project for CS307 Principles of Database Systems.

  Developed an interactive forum with a PostgreSQL backend databse in JDBC. Supporing a wide range of functions including multimdedia display and a dynamic trending list. Self-implemented concurrent socket communication and connection pool with C3P0 and Semaphore.
- **Single Cycle CPU (Verilog, MIPS)**: Course project for CS202 Computer Organization.

  Developed a single cycle CPU with UART communication and VGA display. Conducted comprehensive tests on FPGA development board.

Awards and Services

- **Outstanding Undergraduate Thesis**: Modelling Return Correlations for Chinese Stock Market: An Application of Transformer Model
- **Best Visualization Award @ American Statistics Association DataFest Competition 2022** : Performed data analysis on healthcare dataset from Play2Prevent lab, Yale School of Medicine with Python visualization and data analysis tools. Presentation video: https://datafestnd.weebly.com/datafest-2022.html
- **Best Project Award @ University Public Welfare Challenge 2021**: Team leader of project GreenChamber. Project is under long-term maintenance in coopetation with school library.
- **Outstanding Volunteers Award @ SUSTech (Feb. 2021)**: Providing free online tutoring service for children of medical workers during COVID-19 pandemic.

Skills

- **Programming**: Python, Java, SQL, C/C++, Verilog, MIPS; PostgreSQL, Pytorch, Numpy, Scipy, OpenMP
- **Language**: English (Fluent, TOEFL 112, GRE 329); Chinese (Native)