Thomas Nomura

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EDUCATION

- **University of Michigan, Ann Arbor** — Ann Arbor, MI
  B.S, Computer Science & Statistics — *Aug. 2023 – May. 2026*
  - **Courses**: Data Structures and Algorithms, Software Engineering, Computer Architecture, Discrete Mathematics, Linear Algebra, Probability Theory, Computation Theory

TECHNICAL SKILLS

- **Languages:** C++, C#, TypeScript, Java, Python, R
- **Technologies:** Linux, Git, Docker, Jira, XUnit, SonarQube, .NET, HTML/CSS, Talend, SQL, GCP, MySQL, BigQuery

EXPERIENCE

- **United Wholsale Mortgage** — Pontiac, MI
  Software Development Intern — *May 2024 – August 2024*
  - Created a micro-service in C# to communicate with the BitBucket API and migrate data to a datamart with the goal of monitoring production code changes and developer activity.
  - Developed risk models using Python and R, analyzing data from the created micro-service. This increased internal work tracking data by 200%.
  - Architected a datamart for cost-effective queries of Capital Markets team's client data, halving the average cost of pulling information from GCP.
  - Implemented ETL processes from the constructed datamart following Agile principles, enhancing the Capital Markets team's loan selling capabilities.
  - Automated reporting for loan sales to JPMorgan Chase and Goldman Sachs. Created procedures in Talend for a file-drop system, reducing data structuring and transmission time by 60% after loan purchases.

- **Investment Alpha LLC** — Ann Arbor, MI
  Software Engineer Intern — *June 2023 – August 2023*
  - Engineered an indexing algorithm based on B-Tree structure for main databases, reducing query time by 20% for time-ranged queries.
  - Collaborated one-on-one with a mentor to design and implement a database schema using Azure SQL, enhancing data management capabilities for migration to a Kafka logging system.
  - Collaborated with a 5-member team to develop proprietary software for instant data lookup using Kafka for time-stamped data logging and Kubernetes for orchestration. This solution enabled precise historical data retrieval and visualization at specific time points.

PROJECTS

- **"Compose"** – TypeScript / React.js / Flask / Llama-3 / Gmail API — June 2024 – Present
  AI Integrated Web Application
  - Creating extensions for Gmail and Git for email and commit message generation
  - Leveraging TypeScript/React.js for front-end and Flask for back-end development
  - Generating Llama-3 powered automated responses using code diff, thread parsing, and contextual inference

- **Computer Vision** – C++ — September 2023 – October 2023
  Pixel Processing and Large Scale Seam Carving
  - Utilized a seam carving algorithm for content aware resizing of images
  - Implemented features, such as testing, debugging, stream and file I/O, and ADTs
  - Trained the algorithm with over 1,000 images to ensure accuracy
  - Renders 500x500 image matrices, including 250,000 pixels