

# Vignesh Venkatesh

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## EDUCATION

### New York University - Courant

*Masters of Science, Computer Science*

New York City, NY

Sep. 2025 – May 2027

### The Pennsylvania State University

*Bachelor of Science, Computer Science*

State College, PA

Aug. 2021 – May 2025

- **Cumulative GPA:** 3.5/4.0

## EXPERIENCE

### Distributed Control Systems - Intern

*Yokogawa Electric*

May 2024 – June 2024

*Abu Dhabi, U.A.E*

- Executed inspections of DCS cabinets, ensuring adherence to functional design specifications.
- Developed alarm suppression systems, step function, and moving average block for industrial plant monitoring systems.
- Assisted in managing project engineering life cycles, contributing to the inception stage.

### Digital Design Course - Learning Assistant

*The Pennsylvania State University*

Aug. 2023 – May 2025

*State College, PA*

- Managed and moderated an online class forum, providing feedback on student posts and facilitating discussions.
- Assisted the professor in grading assignments, ensuring timely and accurate evaluation of 200+ submissions per week.
- Collaborated with the professor and other teaching assistants to develop course materials and content.

## PROJECTS

### Dynamic Memory Allocator – GitHub

- Designed and implemented a dynamic memory allocator, optimizing memory management through efficient allocation and deallocation of blocks in a custom heap system.
- Developed a segregated free list to organize memory into bins based on block sizes, improving allocation speed and reducing fragmentation.
- Utilized 16-byte alignment for both allocated and free blocks, ensuring performance optimization and adhering to memory structure constraints.
- **Technical Skills:** C

### Movieboxd – GitHub | Demo

- Built a full-stack web application for discovering, reviewing, and tracking movies, inspired by Letterboxd.
- Developed a secure auth system using Supabase Auth and managed user data with Supabase (PostgreSQL).
- Integrated the TMDB API to fetch real-time movie metadata, ratings, and cast details.
- Designed a RESTful backend using Hono, enabling scalable and efficient API endpoints.
- **Technical Skills:** React, TypeScript, Hono, PostgreSQL, Supabase, TMDB API

### Chess.com Player Stats – GitHub | Demo

- Developed an interactive Chess.com-Player Stats application.
- Integrated the Chess.com API using JavaScript to fetch player stats across three categories i.e., Bullet, Blitz and Rapid.
- **Technical Skills:** HTML, CSS, JavaScript

## TECHNICAL SKILLS

**Languages:** JavaScript, TypeScript, HTML, CSS, Python, C, SQL

**Databases:** PostgreSQL, SQLite

**Frameworks/Libraries:** React.js, TailwindCSS, DaisyUI, Hono, Express.js, Better-Auth

**Developer Tools:** Git, GitHub, Postman, Docker, Visual Studio Code

**Misc:** NPM, Bun, Vite