

# Steven (Hongchen) Yang

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## Education

### Brandeis University, Waltham, MA

*Expected May 2027*

B.S. in Computer Science

GPA: Major 4.0 / 4.0; Overall 3.765 / 4.0

Dean's List (All Semesters)

**Relevant Coursework:** Operating Systems, Principle of Systems Design, Intro to Databases, Intro to Machine Learning, Automation in Software Development, Theory of Computation, Data Structures & Algorithms

## Personal Experience

### Software Engineering Intern

*May 2024 – Aug 2024*

Shanghai Development Center of Computer Software Technology

- Optimized SQL query planning pipeline for Supersonic AI platform by analyzing translation, parsing, and execution layers.
- Enhanced backend modules in RuoYi framework using Spring Boot, MyBatis, and Redis; improved reliability and modularity.
- Refactored legacy Java components using streams and lambdas to reduce code complexity and improve performance.

### Researcher, Smart & Scalable Data Systems Lab

*May 2025 – Present*

Brandeis University

- Engineered workload-aware tuning policies in RocksDB; reduced latency and improved throughput under varying I/O patterns.
- Applied grouping and pruning heuristics to shrink parameter search space, increasing autotuning efficiency.
- Built an online learning model to adaptively adjust DB configurations based on real-time workload features.

### Data Science Intern (Independent Study)

*Jan 2026 – Present*

Brandeis University

- Developed Python ETL pipelines for education data governance; implemented data lineage tracing across silos.
- Designed annotation and provenance tracking modules to ensure transparency and auditability in reporting systems.

## Open Source & Projects

### fpstreams (PyPI) [PyPI Link](#) — [GitHub](#)

*Dec 2025 – Present*

- Published a type-safe functional programming library for Python (Streams + Option/Result) with lazy pipelines and parallel execution for data processing.
- Built a production-ready package with automated releases/tests, documentation site, and optional Rust acceleration path for selected operations.

### Soccer Analytics Platform [GitHub](#)

*Nov 2025 – Present*

- Built a Dockerized ingestion and storage pipeline (PostgreSQL, Redis) for match data; implemented caching to reduce repeated API fetches and improve query responsiveness.

### Brandeis Possible Career Accelerator

*Oct 2025 – Nov 2025*

- Selected through faculty nomination for competitive tech-industry training program; completed product-focused capstone using cross-functional frameworks.

## Teaching Experience

### Teaching Assistant, Introduction to Database Systems

*Jan 2026 – Present*

Brandeis University

- Led office hours for 50+ students covering SQL, ER design, normalization, and query tuning.
- Provided feedback and grading for projects and exams to reinforce database design principles.

## Technical Skills

**Languages:** Java, C++, Python, JavaScript, SQL, Rust, GO

**Frameworks/Tools:** Spring Boot, MyBatis, Docker, PostgreSQL, Redis, Git, Linux

**Spoken Languages:** Mandarin (Native), English (Fluent)