

Vincent Schacknies

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Education

Northeastern University

Expected May 2027

Khoury College of Computer Science, Candidate for BS in Computer Science

(GPA: 3.73 / 4.00) Boston, MA

- **Relevant Coursework:** Programming in C++, Algorithms and Data Structures, Object Oriented Design, Linear Algebra, Introduction to Databases, Computer Systems, Mathematics of Data Models.

Technical Knowledge

Languages: Python, C++, Java, SQL, Javascript, HTML, CSS

Tools/Frameworks: Docker, Flask, Electron, React.js, RESTful Services, Node.js, Git, Pytest, JUnit

Certifications: IBM Full Stack Developer Certified

Projects

Portfolio: vschac.com

Vit

Jul – Aug 2025

Concept: A version control software written in C++ following the Git object model that provides AI powered features such as adding comments, generating reviews, and splitting large commits into smaller descriptive ones. The AI client is swap-able between the OpenAI API and a locally run model.

Frameworks/Technologies: OpenAI API, Curl (C++), Ollama, CMake

Future Development Plans: Continue to integrate features from Git such as cloning and a staging area.

JAX-PT

Apr – Aug 2025

Concept: A differential perturbation theory calculator for cosmology. JAX-PT is a re-write of the FAST-PT codebase to leverage Jax's autodifferentiation, GPU acceleration, and JIT compilation, providing up to 100x speedup against FAST-PT. It is available for installation on PyPi.

Frameworks/Technologies: Jax, Differential Programming, JIT Compilation, Cuda

Future Development Plans: Maintain the code with new features from both Jax and FAST-PT.

Experience

NASA Funded Cosmology Research at NEU

Jan – Jul 2025

Software Engineer

Boston, MA

- Accelerated all Fast-PT computations by 2–3x through a multi-tiered caching system.
- Redesigned and modernized the API to enable seamless integration with cosmology software tools (e.g., CLASS, CAMB).
- Authored comprehensive documentation and implemented a unit testing framework (pytest) to improve maintainability and scientific reproducibility.

Zeta Beta Tau Fraternity

Aug – Dec 2024

Operations Director

Boston, MA

- Managed internal tasks including brother attendance at events, communications with nationals, and dispute resolution.
- Formed and upheld relations with alumni via a monthly newsletter and informed them on alumni events happening with the current chapter.

EIT Care

Jul – Sept 2022

IT Support

Houston, TX

- Worked one-on-one with clients of the company to discuss their needs and identify solutions.
- Created macro in Excel using Visual Basic to convert pharmacy COVID test results to state regulated format.
- Collaborated with employees to perform an audit of the company directory and user access applications.

Other Interests

US Figure Skating Double Gold test level, yearly performances for Northeastern Figure Skating Club, travel, recreational gym enthusiast