Jeffrey M. Helt

Computer Science Department
Princeton University
35 Olden Street, Princeton, NJ 08540

Education

PRINCETON UNIVERSITY — Princeton, NJ

Ph.D. in Computer Science. Expected 2023.
M.A. in Computer Science, 2020.
Adviser: Wyatt Lloyd

CARNEGIE MELLON UNIVERSITY — Pittsburgh, PA

M.S. in Computer Science, 2018.
Advisers: Vyas Sekar & Srini Seshan

AMHERST COLLEGE — Amherst, MA

B.A. in Computer Science & Economics, 2013.

Research Interests

Distributed systems, databases, computer networks.

Peer-Reviewed Publications

[1] **Jeffrey Helt**, Abhinav Sharma, Daniel J. Abadi, Wyatt Lloyd, Jose M. Faleiro. C5: Cloned Concurrency Control that Always Keeps Up. To appear in *Proc. VLDB Endowment (PVLDB)*. 2023.

[2] Matthew Burke, Florian Suri-Payer, **Jeffrey Helt**, Lorenzo Alvisi, Natacha Crooks. Morty: Scaling Concurrency Control with Re-Execution. To appear in *Proc. European Conference on Computer Systems (EuroSys)*. 2023.

[3] **Jeffrey Helt**, Matthew Burke, Amit Levy, Wyatt Lloyd. Regular Sequential Serializability and Regular Sequential Consistency. In *Proc. ACM SIGOPS Symposium on Operating Systems Principles (SOSP)*. 2021.

[4] Soo-Jin Moon, **Jeffrey Helt**, Yifei Yuan, Yves Bieri, Sujata Banerjee, Vyas Sekar, Wenfei Wu, Mihalis Yannakakis, Ying Zhang. Alembic: Automated Model Inference for Stateful Network Functions. In *Proc. USENIX Symposium on Networked Systems Design and Implementation (NSDI)*. 2019.

Teaching Experience

Fall 2022 — **Instructor** — CSC-225: C & Systems Programming, Camden County College
Undergraduate course on the fundamentals of systems programming in C. About 20 students. Taught lectures twice weekly; adapted and implemented projects; created and administered exams; and held office hours.

Fall 2022, Fall 2019 — **Teaching Assistant** — COS-418: Distributed Systems, Princeton University
Advanced undergraduate and master's course on the fundamentals of distributed systems. About 100 students. Taught weekly recitation, held office hours, occasionally taught lectures, and helped grade exams.

Fall 2020 — **Teaching Assistant** — COS-316: Principles of Computer System Design, Princeton University
Undergraduate course surveying topics in the design, implementation, and evaluation of computer systems. About 60 students. Taught weekly recitation, held office hours, and helped improve programming assignments.

Spring 2017 — **Teaching Assistant** — 15-386: Neural Computation, Carnegie Mellon University
Advanced undergraduate and master's course on the computational mechanisms underlying intelligent behavior. About 40 students. Graded and held weekly office hours.

2015 – 2016 **Volunteer Teacher** Advanced Computer Science, Code Nation
High-school course on advanced web development. About 25 students. Worked with two other volunteers to teach classes twice weekly.

2014 – 2015 **Volunteer Teacher** Computer Science Foundations, Code Nation
High-school course on fundamentals of computer science and web development. About 30 students. Worked with two other volunteers to teach classes twice weekly.

Fall 2012 **Teaching Assistant** COSC-161: Computer Systems I, Amherst College
Introductory undergraduate course on fundamentals of hardware and software systems. About 30 students. Assisted students during weekly lab sessions.

Fall 2012, Spring 2011, Fall 2010 **Teaching Assistant** COSC-111: Computer Science I, Amherst College
Introductory undergraduate course on fundamentals of computer science and Java programming. About 120 students. Assisted students during weekly lab sessions.

Professional Experience

2014 – 2016 **Software Engineer**, Squarespace.

2013 – 2014 **Technology Analyst**, Goldman Sachs.

Departmental Service

2017 – 2018 Carnegie Mellon University M.S. in Computer Science Admissions Committee.

Honors & Awards

2022 Community College Teaching Fellow.

2020 Computer Science Graduate Student Teaching Assistant Award.

2018 NDSEG Fellowship Alternate.

2018 Dr. Ilian L. Mihov '96 Graduate Fellow.

2017 Siebel Scholar, Class of 2018.