

Emmanuel Eppinger

manny@cmu.edu
LinkedIn: [eppingere](#)
Portfolio: [eppi.ng](#)
GitHub: [eppingere](#)

EDUCATION

Carnegie Mellon: School of Computer Science

Bachelors of Science in Computer Science, Computer Systems, Pre-Law

Graduation: December 2020 or May 2021 (We'll see with COVID-19)

Relevant coursework:

- 15-721: Advanced Database Systems
- 15-445: Introduction to Database Systems
- 15-440: Distributed Systems
- 15-746: Advanced Storage Systems (Fall 2020)

SOFTWARE EXPERIENCE

Jump Trading — Incoming Software Engineering Intern

June 2020 - August 2020

MongoDB — Software Engineering Intern: go.mongodb.org

May 2019 - August 2019

Working as part of a team to build driver for Google's GoLang. Helped build and maintain a large codebase that is used by over 30000 developers who use MongoDB in GoLang. Worked on all parts of the driver, from high-level API design to low-level implementation of database wire protocols.

OTHER EXPERIENCE

Head Orientation Counselor, CMU First-Year Orientation: eppi.ng/hoc

November 2019 - October 2020

As part of a team, planned, organized, and ran CMU's first-year orientation for more than 1600 students. Managed a team of ~160 orientation staff to run a 10-day orientation program. Planned during Coronavirus and resulting contingencies

Metapac, SuperPAC — Founder & Director: metapac.org

June 2018 - December 2018

Started SuperPAC political organization with the goal of working to improve education on election finance and research

PROJECTS

Thread Pool: CMU DB's Terrier: eppi.ng/terrier

Built NUMA aware thread pool for database. Enables parallel scans of database tables by NUMA region. Integrates with system mutexes to allow for threads to do productive work while waiting on a system latches. Designed to emulate the performance benefits from the morsel scheduler in Hyper through NUMA Aware data processing and SQLOS's quantum-based thread scheduling

Concurrent B+Tree: CMU DB's Terrier: eppi.ng/terrier

Implemented B+Tree database index. Designed to be highly concurrent. Enable reads, non-splitting writes and deletes to be latch-free. Performs comparably to BW-Tree on many workloads and outperforms it by up to 20x on random highly-concurrent reads and writes.

Babble: 100% Offline Chat Platform: eppi.ng/babble

4x winning project at PennApps XVIII, developed completely decentralized messaging platform. Built localized mesh network into app that allows app to be installed, setup, and used without internet connection.

Skills

Languages:

GoLang
C++
Python
Java
Standard ML
C

Tools:

MongoDB
SQL
Git
Unix/Linux

Interests

CMU Varsity

Swimming:

- 3-time scoring member of UAA team
- 2-time NCAA B-cut Qualifier
- 2-time Scholastic All-UAA
- 3-time AMS Scholastic All-American

Orientation Staff:

- Orientation Leader: 2019, Orientation Counselor: 2018

Teaching Assistant:

- Teaching Assistant for 15-112: Fundamentals of Programming
- 07-131: Great Practical Ideas in Computer Science

Student Government:

- Representative for School of Computer Science in Undergraduate Student Senate: Academic Affairs Committee
- Worked on academic policy issues from Add/Drop deadline changes to Transcript Release Policies