Taylor Blau

https://ttaylorr.com Email: ttaylorr@github.com

Last updated: October, 2025

Experience

- **GitHub, Inc.**
  Principal Software Engineer, Git Contrib 09/2025 — Present
  Staff Software Engineer, Git Contrib 03/2022 — 09/2025
  Senior Software Engineer, Git Contrib 09/2020 — 03/2022
  - Implemented multi-pack reuse, enabling `pack-objects` to stream verbatim sections from multiple packfiles.
  - Implemented pseudo-merge reachability bitmaps, improving `fetch` performance from ∼16 s to ∼400 ms.
  - Implemented cruft packs for garbage collecting unreachable objects by storing them alongside their `mtime`s.
  - Implemented multi-pack reachability bitmaps, and geometric repacking, improving average maintenance time by 50%.
  - Implemented an on-disk format for reverse packfile indexes, improving p99 `fetch` times by 33%, ∼1 TiB RSS savings.
  - Write release highlight posts on the GitHub Blog covering recent Git releases.

  Software Engineer, Git Contrib 01/2020 — 09/2020
  - Contributor to the open-source version control system `git`. Co-maintainer of GitHub's internal fork.
  - Deploy new features from upstream Git at GitHub (e.g., partial clone, commit-graph, etc.)

  Infrastructure Engineer, Git Storage 03/2018 — 01/2020
  - Merged and deployd new versions of Git into GitHub's private fork.
  - Contributed efficient multi-refspec traversal, repository alternate advertisement, commit-graph deployment at GitHub.

  Infrastructure Engineer, Git Ecosystem 06/2016 — 03/2018
  - Lead maintainer of Git extension Git LFS. Implemented retryable object transfers, repository migration tool, file locking feature, and streaming conversion filter. Hired and trained new contributors to Git LFS.

- **Mixer (formerly Beam, acquired by Microsoft)**
  Developer 01/2015 — 06/2016
  - Developed RTMP protocol implementation in Go for use in streaming video pipeline.

Education

- **University of Washington** 2017 — 2020
  B.Sc. with Distinction in Computer Science, Mathematics Minor

  Computer Science Coursework:
  - CSE 401 – Introduction to Compiler Construction
  - CSE 421 – Introduction to Algorithms
  - CSE 431 – Introduction to Theory of Computation
  - CSE 446 – Machine Learning
  - CSE 452 – Distributed Systems

  Mathematics Coursework:
  - MATH 307 – Introduction to Differential Equations
  - MATH 308 – Matrix Algebra with Applications
  - MATH 309 – Linear Analysis
  - MATH 324 – Advanced Multi-Variable Calculus I
  - MATH 380 – Advanced Linear Algebra

  Advisor: Dan Grossman
  Thesis: *Verifying Strong Eventual Consistency in δ-CRDTs*
  Honors: *Phi Beta Kappa*, *Cum Laude*, Annual Dean's List

Publications

1. C. Nandi, J. R. Wilcox, P. Panchekha, **T. Blau**, D. Grossman, and Z. Tatlock. Functional programming for compiling and decompiling computer-aided design. *Proc. ACM Program. Lang.*, 2(ICFP):99:1–99:31, July 2018

Speaking

- Git Merge (San Francisco, CA) 09/2025
  Presented *New Techniques in Repacking Monorepos*, discussing recent progress on incremental MIDX/bitmap support in Git and new maintenance strategies.
- Git Merge (Berlin, DE) 09/2024
  Presented *Scaling Git*, an overview of advanced repository maintenance and packing techniques.
- Git Merge (Chicago, IL) 09/2022
  Presented *Git at GitHub Scale*, an overview of how GitHub uses and contributes to Git to serve > 200M repositories.