

Taylor Blau

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Last updated: February, 2024

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EXPERIENCE

• GitHub, Inc.

Staff Software Engineer, Git Contrib

03/2022 — Present

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 **mtimes**.
- 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 deployed 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 341 – Programming Languages
- 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 126 – Calculus with Analytic Geometry III
- 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 (Chicago, IL)

09/2022

Presented *Git at GitHub Scale*, an overview of how GitHub uses and contributes to Git to serve > 200M repositories.

• Git Merge (Brussels)

02/2017

Discussed an overview of changes made to the Git and Git LFS open-source projects to audience of version control experts.