Peter Goldsborough

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EXPERIENCE

- **Broad Institute of MIT and Harvard**, Cambridge, USA 08/2017 — 11/2017
  Research Intern, Imaging Group
  - Research on Generative Adversarial Networks for representation learning of microscopic cell images,
  - Poster at workshop on Machine Learning in Computational Biology at NIPS 2017.
- **Facebook**, London, United Kingdom 05/2017 — 08/2017
  Intern, Realtime Data
  - Optimized a highly distributed realtime logging framework at the core of Facebook infrastructure,
  - Doubled throughput, redesigned major parts of the codebase and greatly improved test coverage,
  - Invited to dinner with Mark Zuckerberg as one of 13 interns (out of several thousands).
- **Bloomberg**, London, United Kingdom 11/2016 — 04/2017
  Intern, Instant Bloomberg
  - Extended the Instant Bloomberg (IB) messaging system to trace message paths through datacenters,
  - Wrote a network traffic simulation tool to produce messages to Apache Kafka message queue clusters.
- **Google**, London, United Kingdom 08/2016 — 11/2016
  Intern, gTech
  - Built chatbots in Go, using the natural language processing engine inside Google's Allo app,
  - Open-sourced an AngularJS integration of Google's GPT library in an official Google GitHub organization.
- **Technical University Munich**, Germany 04/2016 — 09/2016
  Research Assistant, Chair for Database Systems
  - Investigated interprocess communication techniques for low-latency transmission of database queries,
  - Implemented a library to replace domain sockets by injecting a shared memory transmission channel.

PROJECTS

- Lead a team of 12 students to develop an assembly simulator in C++14 supporting RISC-V, x86 and ARM ISAs.
- clang-expand is a clang and LLVM based tool to inline function calls and expand macros in C, C++ and Objective-C for visual benefit and easier refactoring. Featured in LLVM Weekly 169.
- lru-cache is a least-recently-used (LRU) cache data structure in modern C++ for efficient memoization.
- Conference talks on Engineering Challenges of Deep Learning, Deep Learning with TensorFlow, C++ Tooling with clang and LLVM and more.

EDUCATION

- **Technical University Munich (TUM)**, Germany 2015 — 2017
  B.Sc. in Computer Science
  - 1.2 grade average (1 is best, 6 worst), top 5% in all courses,
  - German national scholarship (1% acceptance rate), Max Weber scholarship (nominated by TUM).

PUBLICATIONS

- *A Tour of TensorFlow*, **Goldsborough** (2016) — arXiv:1610.01178
- *NILM: A Review and Outlook*, Klemenjak, **Goldsborough** (2016) — arXiv:1610.01191
- *CytoGAN: Generative Modeling of Cell Images*, **Goldsborough**, Pawlowski, Singh, Caicedo, Carpenter (2017)