

John Fremlin

Email john@freml.in. UK citizen. Valid H1b.

Experience

- *August 2018 - current* Lyft. New York City. Engineer. Marketplace Labs.
 - New Lyft rules have Uber steaming mad; multi-hundred million dollar per year impact; called out as top project in ride-share and first major feature to launch before Uber.
 - Mentored staff, senior, entry level engineers. Guided roadmap for multiple orgs. Advised top company initiatives.
 - Introduced quantitative validation techniques and cache architecture solving long-standing consistency issues.
- *November 2015 - June 2018* Two Sigma. New York City. Engineer.
 - Novel data-store for interactive queries on microstructure level market data, used for research and trading multiple in asset classes.
 - Improved multi-datacenter HDFS-based storage system, reducing tail latency 7x, 2x read speed for typical requests. Introduced SRE methods, increasing mean time between outage from days to weeks.
- *October 2011 - November 2015* Facebook. Menlo Park. Engineer. From feedback: “Facebook needs more tech leaders like John!” (senior product manager). Active in recruiting on and off campus. “Wrote the book on the design interview.” (eng. director).
 - Started and launched Facebook Live.
 - Moonshot elastic compute cloud. System for utilizing spare compute resources; teraflops of Top500 supercomputer. Lead engineer for cross functional effort generating 700M lookback videos (unprecedented improvement to user sentiment). Novel video optimization algorithm saving average 30% space without perceptual degradation and more than 1 PB per day of user network traffic.
 - Growth team. System for targeting A-B test variants (multi-armed bandit), increasing signups by millions of users. Improved training for email response models increasing daily active users by millions.
- *March 2010 - July 2011* UBS investment bank, London. Quantitative analyst.
 - Revamped model DSL adding user defined functions, closures, GC, lexical scoping. Used for calibrating stochastic and non-stochastic multi-factor models including core yield curves.
 - System for hedging a portfolio’s interest rate vega structure balancing skew, vanna and IR delta. System for optimizing complex exotic product hedging billions of dollars of residual credit risk.
- *December 2008 - September 2009*. Mathematical Systems, Tokyo: statistical software consultancy. Custom development in Common Lisp for NTT Research, monitoring large 100k router network.
 - Portable persistent memory-mapped object database integrating into Lisp object system with the Meta-Object Protocol (MOP) offering atomic transactions (manaradb).
- *October 2004 - December 2005*. Alphamosaic (bought by Broadcom), Cambridge: semiconductor company specialising in low-power embedded video. Engineer on the software research team.
 - Embedded C software development: system-wide performance optimization (reduced CPU load 20% with new mutual exclusion technique). H.264 codec improvements enabling design win to Apple iPod, majority of revenue. High-level ASIC design for JPEG codec and cache architecture.
- *Spring 2000*. Linux kernel. Contributor. USB driver for a scanner; (drivers/usb/microtek.c).

Personal

- squarectf 2017, first prize team for security capture the flag competition: x86 reverse engineering and SQL injection.

Education

- *2001-2004*. BA Mathematics, Cambridge University. Cambridge University Computing Society Chairman (2001).