Changlin Li

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Work Experience

Sabbatical (Technology)/Recurse Center 2023 Summer Batch   New York, NY
Independent Research into AI safety   May 2023 - Sept 2023
- Study of modern AI and AI safety technical fundamentals
  - Building a pedagogical RL model for illustrating extremely harmful but subtle goal misgeneralization
- Attempting to build RC into an AI safety-aware community
  - Leading weekly study sessions using aisafetyfundamentals.com's curriculum
  - Leading AI study sessions as an onramp to AI safety instead of capabilities

Vowel.com   New York, NY and San Francisco, CA
Founding Engineer (Employee 5)   Sept 2019 - March 2020 (Part-time) / March 2020 - April 2023 (Full-time)
- Creator and architect of data analytics platform
  - End-to-end ELT solution built on top of Segment, Redshift, dbt, and Mode (+ bunch of k8s glue)
- Creator and architect of automatic teleconferencing metric monitoring platform
  - Monitor true screen-to-screen latency, bandwidth usage, and other teleconferencing quality metrics
  - Anomaly detection in testing and production environments
- Leading the fledgling data analytics team
  - Managing one other engineer for marketing analytics work

Sabbatical (Technology)/Recurse Center 2019 Summer Batch   New York, NY
Independent Research into Formal Verification   July 2019 - Sept 2019
- Study of temporal logic
  - Formalization of Peterson's Algorithm in TLA+ `https://github.com/changlinli/peterson-tlaplus`
  - Formalization of lock-based, serialized, and Chandy-Misra solutions to the Dining Philosopher's Problem `https://github.com/changlinli/dining-philosophers-tlaplus`
- Study of formally verified programming languages
  - Deepening familiarity with Idris and Dafny

Bridgewater Associates: Systemized Intelligence Lab   Westport, CT
Technology Associate   Sept 2014 - Dec 2018
- Primary Scala expert on team; leading main language-level technical decisions
- Main architect of and developer of central analytics platform
  - Platform responsible for real-time analysis of company meetings, both immediate notifications of interesting behavior within a meeting and historical analyses of meetings
  - Successfully processed 100,000 events per second (equivalent to ~10,000 people in a meeting)
- Co-architected with two coworkers new Event Sourced distributed architecture for BI product
  - Kafka-based event log with AWS Aurora (or PostgreSQL)-backed checkpointing
- Maintained and implemented new optimizations for in-house visual logic DSL to Clojure compiler
- Collaborated on version control system for logic DSL

Technical Skills

Languages (Left-most most familiar): Elm, Python, Haskell, Kotlin, Scala, Java, Idris, Clojure, TLA+, C, Javascript

Talks:
- 2018 Northeast Scala Conference: Moving Beyond Defensive Programming
  - Talk topic: Leveraging Scala's type system to supersede traditional defensive programming
  - Video: `https://youtube.com/watch?v=Csj3lzsr0_I`

Education

Harvard University   Cambridge, MA
- B.A. with Honors in Mathematics May 2014 (Secondary/Minor in Comparative Study of Religion) (3.72/4.00)
- 2012 Certificate of Distinction in Teaching as a Teaching Fellow
- 2012 Harvard Nectar Grant Award Recipient