Phillip Lopes Mates — Resume

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Statement

I'm an engineer interested in building well-measured software, is discerning about tooling, and places precedence on the development process. I'm happiest when building products that empower users and facilitate social change.

Experience

Software Engineer, Nextjournal, Berlin, DE — *2022 –*
Part of a small team using Clojure/script and Datomic to solve supply-chain problems. We employ modable-development, strive to keep our toolset small and honed, and are learning to navigate the balances between simplicity and completeness.

Compilers Engineer, Igalia, Remote — *Aug. – Dec. 2021*
Implemented the Shadow Realms JavaScript feature in JavaScriptCore and explored an unboxing optimization in the V8 JavaScript engine.

Data Infrastructure Engineer, Nubank, Berlin, DE — *2017 – 2021*
- ◇ *Data infrastructure:* Innovating over our ETL for Datomic-backed services and developing data processing tools used by hundreds of internal clients.
- ◇ *Testing frameworks:* Maintainer of several key testing tools at Nubank.
- ◇ *Technical lead:* Set technical priorities for a small team focused on data ingestion and publishing.

Software Engineer, Nubank, São Paulo, BR — *Feb. – Oct. 2017*
- ◇ *Microservices:* Build and maintain microservices in Clojure for a mobile-driven credit card product
- ◇ *Engineering productivity:* Build tools and improve core Clojure libraries to boost the efficiency of a 100+ engineering team.

Software Engineer, Dimagi, Boston, MA — *2015 – 2017*
- ◇ *CommCare:* improved stability and performance of an Android app used by tens of thousands of users world-wide. Implemented new features for users with low tech literacy.
- ◇ *Tests:* established unit-level Robolectric and UI-level Calabash test systems for Android. Built an integration test-suite between mobile and server apps. Setup cross-repository CI system.
- ◇ *Legacy code:* performed substantial refactors on a 5-year-old production legacy codebase. Migrated from Java 3 to 8 and from the Ant to Gradle build system.
- ◇ *User empathy:* Worked with users to make development in the CommCare app building platform more approachable and efficient.

PUBLICATIONS	**Under Control: Compositionally Correct Closure Conversion with Mutable State**	*PPDP 2019*

PUBLICATIONS

Under Control: Compositionally Correct Closure Conversion with Mutable *PPDP 2019*
State
P. Mates, J. Perconti and A. Ahmed
Principles and Practice of Declarative Programming

A Provenance-Based Infrastructure to Support the Life Cycle of Executable *ICCS 2011*
Papers
D. Koop, E. Santos, P. Mates, H. Vo, P. Bonnet, B. Bauer, B. Surer, M. Troyer, D.
Williams, J. Tohline, J. Freire and C. Silva.
International Conference on Computational Science

CrowdLabs: Social Analysis and Visualization for the Sciences *SSDBM 2011*
P. Mates, E. Santos, J. Freire and C. Silva
International Conference on Scientific and Statistical Database Management

The ALPS project release 2.0:
Open source software for strongly correlated systems *JSTAT 2011*
B. Bauer et al. (ALPS collaboration).
Journal of Statistical Mechanics: Theory and Experiment

Towards Supporting Collaborative Data Analysis and Visualization
in a Coastal Margin Observatory *CSCW 2010*
E. Santos, P. Mates, E. Anderson, B. Grimm, J. Freire and C. Silva
Workshop on The Changing Dynamics of Scientific Collaboration

TALKS

The rise and fall of e2e at scale *April 2019*
Dutch Clojure Days, Amsterdam, NL

How we test at Nubank *April 2018*
Dutch Clojure Days, Amsterdam, NL

Kripke Logical Relation for Affine Functions:
The Story of a Free Theorem in the Presence of Non-termination *Sept. 2013*
The 2nd ACM SIGPLAN Workshop on Higher-Order Programming with
Effects, Boston, MA

EDUCATION

Northeastern University, Boston, MA *2012 – 2014*
MS in Computer Science, Programming Languages focus

University of Utah, Salt Lake City, UT *2008 – 2011*
BS with honors in Computer Science, *December 2011*

TECHNICAL SKILLS

Languages: Clojure, Java, Scala, Python, Racket
Platforms/Tools: Datomic, Kafka, Android