

# Adelbert Chang

adelbertc@gmail.com • <https://github.com/adelbertc> • <https://adelbertc.github.io>

- Experience**
- Lead Data Engineer**, Target @ Sunnyvale, CA July 2017 - Present  
Deployments and experimentation for the Data Science and Optimization team.
- (Sr.) Software Engineer**, Box @ Redwood City, CA April 2014 - July 2017
- Lead effort to break apart monolithic Scala project and build tooling for the entire Backend team
  - Designed and implemented a rule engine for anomaly detection on the Security team
  - Wrote tools to measure and report service SLAs on the Services team
  - Built initial Spark infrastructure and content classification system on the Machine Learning team
  - Mentored Scala development and expanded Box's presence in the Scala community at conferences
- Research Assistant**, SAND Lab @ UCSB Feb 2011 - October 2013  
Working in the Systems, Algorithms, Networking, and Data Lab on graph querying, mining, and modeling, advised by Professors Ben Y. Zhao and Heather Zheng.
- Assisted in designing and implementing a graph coordinate system for both symmetric and asymmetric random walk distances, allowing rapid querying of pairwise distances
  - Implemented synthetic graph generation algorithms to model social graph structures, allowing researchers needing graph datasets to readily generate as many datasets as needed without sacrificing privacy

- Skills and Interests**
- Topics:**  
Deployments    Experimentation    Infrastructure    Data-Intensive Computing
- Systems:**  
Kubernetes, Nix, Jenkins, Spark, Hadoop
- Languages:**  
Scala, Haskell, Python, Nix, C/C++, Bash, Lisp

**Publications**

“The Limitations of Type Classes as Subtyped Implicits.” Adelbert Chang. Proceedings of *8th ACM SIGPLAN International Scala Symposium (SCALA'17)*, Vancouver, Canada, October 2017.

- Talks:**
- Scala World 2017 (Invited talk)
  - Bay Area Haskell Hackathon 2017
  - Functional Geekery Ep. 86, March 2017
  - Scale by the Bay 2016, 2017, 2018
  - Northeast Scala Symposium 2016, 2018
  - Typelevel Summit USA 2016, 2017
  - LambdaConf 2015

- Scala by the Bay 2013, 2014

**Selected Projects** **Nelson - Automated deployment orchestration** <https://getnelson.io/>  
Nelson is a fully automated deployment orchestration tool intended to work with a datacenter scheduling system such as Kubernetes or Hashicorp Nomad. Provides application lifecycle, traffic routing, and automated security policy management. Lead effort to implement the Kubernetes backend and modernize the tech stack.

**Cats - Functional Programming for Scala** <https://github.com/typelevel/cats>  
Cats is a library which provides abstractions for functional programming in Scala. Currently a maintainer and one of the top contributors.

**Frameless - Expressive types for Spark** <https://github.com/typelevel/frameless>  
Frameless is a library for working with Spark using more expressive types. Created when working with Spark felt like it was not as type-safe as it could've been. In active use by a couple of companies and has attracted other contributors who now help maintain the project.

**Education** B.S. Creative Studies (Computer Science Emphasis) [Fall 2010 - Winter 2014](#)  
University of California, Santa Barbara