

# Abhiroop Sarkar

Functional Programming, Compilers, Parallel Programming

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## EXPERIENCE

### Typelead, Bangalore — *Senior Software Engineer*

MARCH 2017 - JUNE 2017

- First engineering hire at TypeLead, the company developing [Eta](#), a Haskell dialect that runs on top of JVM.
- Porting of Software Transactional Memory features from the GHC runtime to the Eta runtime.
- Building Eta-FFI, a tool for generating FFI code for interacting with Java libraries.

### Quintype, Bangalore — *Software Engineer*

MAY 2016 - FEBRUARY 2017

- Design and development of the Elastic Search cluster serving the realtime analytics of the [Quintype platform](#).
- Design and maintenance of the OLAP analytics platform of Quintype written entirely in Clojure.

### Trestor, Chandigarh — *Software Engineer*

NOVEMBER 2015 - APRIL 2016

Design and implementation of a cryptocurrency protocol. Codebase open sourced [here](#).

### Capillary Technologies, Bangalore — *Software Engineer*

MAY 2014 - NOVEMBER 2015

- Design and implementation of a low latency, high throughput communication engine.
- Design and implementation of a live monitoring system for analytics on the performance of the communication engine.
- Designed and implementation of Apache Mahout based Recommendation Engine.

### Google Summer of Code, Remote — *Contract Developer*

MAY 2013 - SEPTEMBER 2013

Ported old Perl / CGI based Reactome search facility to Lucene/ Solr based engine.

## LANGUAGES

Haskell, Java, Clojure,  
Erlang, C#

## TECH BLOG

[abhiroop.github.io](http://abhiroop.github.io)

## OPEN SOURCE CONTRIBUTIONS

[Eta](#), [Liquid Haskell](#), [Cloud Haskell](#)

## EDUCATION

### **University of Nottingham, Nottingham** — *MSc Computer Science*

SEPTEMBER 2017 - PRESENT

Courses in Compilers, Advanced Algorithms and Data Structures, Distributed Systems, Mathematical Foundations of Programming.

### **BITS Pilani, Goa, India** — *MSc (Hons) Mathematics*

AUGUST 2010 - DECEMBER 2014

## PROJECTS

### **fibohheap** — [github](#)

A newly invented purely functional implementation of fibonacci heap in Haskell.

### **okasaki** — [github](#)

Haskell implementation of major purely functional data structures including the ones defined in Okasaki's classic text as well as newer experimental data structure.

### **opto** — [github](#)

Modular Profunctor optics implemented in Haskell.

### **MiniTriangle** — [github](#)

Toy language with a static type system and optimizing runtime written in Haskell.

## PUBLICATIONS

[Trestor cryptocurrency consensus protocol](#)

## OTHER ACHIEVEMENTS

- Cleared the Regional Mathematical Olympiad 2006
- Winner of Google Developers Hackathon, Goa Edition, 2013