

LIU CHEN LU

HIGHLIGHTS Implemented sizable projects in C /C++, Python, Java, Haskell
 Led project in analysis of network traffic using machine learning in corporate environment, leading to filing an intellectual property patent with Google
 Ran a start-up in mobile centric software for trucking navigation and dispatching
Interests: machine learning, artificial intelligence, combinatorics and optimization, entrepreneurship, effective altruism

EDUCATION **BACHELOR OF COMPUTER SCIENCE, UNIVERSITY OF WATERLOO** SEPT 2011 – APR 2016
 3.90 GPA equivalent; Dean's Honor List
BACHELOR OF BUSINESS ADMINISTRATION, WILFRID LAURIER UNIVERSITY
 3.84 GPA equivalent; Dean's Honor List SEPT 2011 – APR 2016

EXPERIENCE **DUE DILLIGENCE STUDENT TEAM AT LAURIER STARTUP FUND** SEPT 2015 – DEC 2015

- Advised the Laurier Startup Fund (an angel investment fund) to invest \$50 000 in SeamlessMD

LEAD SOFTWARE ENGINEER INTERN AT GOOGLE IDEAS APR 2015 – SEPT 2015

- Tech lead on prototyping project using machine learning clustering on network traffic to help detect DoS attacks to independent journalists protected by Project Shield
 - Used unsupervised learning to take advantage of the team's unlabeled logs
 - Experimented with various clustering algorithms and clustering parameters
 - Defined derived features and weights based on DoS SRE's feedback
 - Parallelize using recursive clustering on cluster centers
- Filed a patent for the ML project: a novel method for identifying anomalies in incoming network traffic to web servers for DDoS attack detection
- Implemented features, debugged, re-factored production codebase
 - Major contributor: wrote 4% of team's codebase
 - Focus on logging, data aggregation, and data visualization
 - Worked with AppEngine on Google Cloud Engine (GCE) in Python
 - Worked Nginx, BigQuery
- Primary on-boarder and mentor to more junior intern and recruited a 20% intern

ENTREPREUR AT LAURIER LAUNCHPAD JAN 2015 – APR 2015

- Lead a mobile navigation startup
- Strategically interviewed customer groups and refined customer base based on receptiveness and market size
- Made MVPs and iterated based on customer feedback

SOFTWARE ENGINEER INTERN AT GOOGLE INC JAN 2014 – APR 2014

- Worked on production critical, cross team search features for Google Memory
- Implemented a protocol buffer sharing service between Java and C++ components
- Used Dagger dependency injection, JUnit, Stubby RPC, protocol buffers, JSLayout

DEVELOPER INTERN AT MAPLESOFT JAN 2013 – APR 2013

URA AT CENTRE FOR PATTERN ANALYSIS AND MACHINE INTELLIGENCE SEPT 2012 – JAN 2013

PERSONAL PROJECTS

- Functional evolutionary Boids simulating emergent behaviour, *Haskell*
- Context free parsing applied to the English language via the CYK algorithm, *Python*

Github: <https://github.com/LiuChenLu>