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Resources
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Enrico Borba

Coursework

Computer Science

Operating Systems
Machine Learning
Data Mining
Algorithms
Decidability & Tractability
Functional Programming
Language Theory
Graphics

Mathematics

Discrete Math
Bayesian Statistics
Abstract Algebra
Classical Analysis

Interdisciplinary

Biomolecular Computation
Biological Data Analysis

Software

Operating System

Linux (Ubuntu / Arch)
Mac OSX
Windows

Development & Workflow

neovim + mosh + tmux
git, mercurial, perforce
Sublime Text, Atom
Xcode
i3

Design

Photoshop CS6
Sketch 3
Krita

Office Tools

Apple Pages & Keynote
MS Office Suite

Languages

Fluent

English
Português

Proficient

Español

Basic

(日本語) Japanese

Education

California Institute of Technology

B.S. Computer Science (expected graduation 2019)

(2015 - Present)

Work Experience

Mitsubishi Engineering Intern in Japan

Worked on the systems division to create the infrastructure for sensor data collection & processing inside next generation vehicles. Using biometric sensors, and vehicle data (ex. steering wheel angle) I constructed a model to detect drowsiness or impairment in drivers.

(Summer 2018)

Facebook Software Engineering Intern

Worked with the Search as a Service (SaaS) team. I wrote a scaled down version of the existing SaaS platform for teams looking to test out the service. This involved a lot of scripting (bash/Python), a lot of data fetching (MySQL, Hadoop, Hive), and a web frontend (HHVM).

(Summer 2017)

Google Software Engineering Intern

Wrote an RPC (remote procedure call) tracing tool for the Vanadium project in Golang. Set up a protocol, "HTTP over RPC", which would serve HTML pages which contained data on the RPCs. I also worked with Google Street View to enable car operators to mark road conditions (dirt, private, or public) with a joystick.

(Summer 2016)

Uncanny Vision Intern

Worked on a variety of computer vision projects ranging from Simultaneous Localization and Mapping (SLAM) implementation to multi-sensor integration. Main project consisted of porting and optimizing a post-data collection MSCKF (Multi State Constrained Kalman Filter) implementation in MATLAB to C++ for realtime data analysis on less capable hardware.

(2015 - 2016)

MOSTEC

A six month-long MIT program with a five day conference. Created a twitter data mining tool in Python and gave a presentation on Big Data to MOSTEC students and MIT staff.

(2014 - 2015)

Projects & Programming Languages

Python-CRN

A Chemical Reaction Network simulator presented as a Domain Specific Language. Supports stochastic and deterministic networks.

Crick

HQTrivia Human assistant: Using OCR from a continuous screen capture, provides short, expressive, and context-aware Google queries.

XaTeLite (pronounced "satellite")

LaTeX compilation system served over HTTP. A user can edit the source over SSH and visit a website for the produced pdf.

Mollusk

Unifies the best parts of two popular shells xonsh & fish: fish's autocompletion + xonsh's environment.

Netflix MovieLens Factorization

Used several Machine Learning methods to create a movie recommendation system.

Expert

Python 3.6+

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Advanced

C++

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Processing

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Proficient

C

●●●●○

Haskell

●●●●○

OCaml

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HTML + JavaScript

●●●●○

Basic

Swift

●●●○○

R

●●●○○

Elixir

●●●○○

Golang

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Hack (HHVM)

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Rust

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MATLAB

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