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Charlie Holtz

711 Ladd Road
Bronx, NY 10471

EDUCATION

Brown University — Providence, RI
Bachelor of Science in Cognitive Neuroscience, Computational Track — *May 2018*
Honors, Nominated to Sigma Xi (Scientific Research Honor Society)
Courses: Software Engineering, Functional Programming, Data Fluency, Computational Cognition
Cumulative GPA: *3.49/4.00*

Harvard Graduate School of Design — Cambridge, MA
Design Discovery Program in Architecture — *Summer 2017*

Fieldston High School — Bronx, NY
June 2013

WORK EXPERIENCE

Serre Lab in Computational Vision — Providence, RI
Research Assistant, Web Developer — *2016-Present*
- Awarded honors and *Sigma Xi Honor Society* for thesis on modeling Grid Illusions
- Modeled the visual system in the context of optical illusions, increasing relative accuracy from 75 to 80% by implementing excitation and inhibition between receptive fields in Python
- Led a redesign effort of Brown's Cognitive, Linguistic, and Psychological Sciences website.

Tradeweb Markets — Tokyo, Japan
Market Analyst Intern — *Fall 2017*
- Wrote Python scripts to scrape data on recent trades, increasing data collection speed 10x
- Presented weekly reports on trends in East Asian bond markets
- Updated head of East Asian Markets on cryptocurrency developments

Zone Digital — London, England
Data Analytics Intern — *Summer 2016*
- Created SQL database of 500+ UK competitors and a web app to interact with the data

SELECTED PROJECTS

Modeling of the Visual Stream in the Hermann Grid — *Honors Thesis, Spring 2018*
- Improved accuracy of computational models of the visual cortex by 5%
- Proposed a new biological explanation for the illusory strength of Grid Illusions

Technology: Python, MATLAB, SQL

Stuff Goin' Down — *Software Engineering Final Project, Spring 2018*
- Collaborated to create an interactive life map of the world's breaking news, organized by sentiment
- Created user and sentiment analyzer classes in Java, built user up/down voting functionality

Technology: Java, Javascript, HTML/CSS, D3.js, Google Maps API

Maps — *Software Engineering Project, Spring 2018*
- Web-app similar to Google Maps that takes input from the user and displays the optimal route
- Uses a KDTree to find closest point to input and Djikstra's to optimize the path

Technology: Java, Javascript, HTML/CSS, Spark

EXTRA-CURRICULAR

- Ultimate Frisbee A Team leadership committee — finishing 5th in nation in 2018
- Selected as a Meiklejohn Peer Advisor to advise and support incoming first-years
- Architecture & Design Teacher at the Wheeler High School

Languages: Experience in Python, Java, Javascript, HTML/CSS, TensorFlow, SQL