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# Charlie Holtz

## 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
**Languages:** Experience in Python, Java, TensorFlow, Scala, SQL, HTML, CSS, JavaScript
**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
*Data Engineer 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 (Python)** — *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

**Stuff Goin' Down  (Java)** — *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

**Brown University Cognitive Science Departmental Website** — *Paid Project, Fall 2018*
- Primary developer (UI, site organization, copy) for Brown's new departmental website for Cognitive, Linguistic, and Psychological Sciences.
- Built on Drupal, with certain pages requiring custom HTML/CSS

## LEADERSHIP

- Ultimate Frisbee A Team — 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

**References:**
Dr. Thomas Serre , Brown University – thomas_serre@brown.edu
Paul Worthy  Managing Director of Tradeweb Japan – paul.worthy@tradeweb.com