

# Austin Hoag

(860) 617 8266 | austinthomashoag@gmail.com | austinhoag.github.io  
github.com/austinhoag

## Work Experience

---

### Imaging Product Software Developer

July 2019 - Present

Princeton Neuroscience Institute, Princeton University

Princeton, NJ

- Used computer vision models to perform image segmentation and object detection in brain images
- Created a full-stack web application for researchers to submit, query and visualize experiments
- Wrote well-tested data pipelines for neuroscientific data analysis, scaled for high performance computing

### Independent Contractor

September 2017 - January 2018

Research Done

Oak Park, IL (Remote)

- Used natural language processing to clean and analyze company financial documents
- Mined Wikipedia for company and product information matching text in client's corpus
- Developed a PostgreSQL database to store cleaned data and data products

### Postdoctoral Researcher in Astrophysics

August 2018 - July 2019

University of California, Los Angeles

Los Angeles, CA

- Developed software to detect and classify objects in terabyte-scale space telescope imaging datasets
- Used Bayesian inference to constrain physical properties of ultra-distant galaxies from telescope images
- Published over 40 scientific articles (6 first-author) in peer-reviewed journals during my career in academia

### University of California, Davis

Davis, CA

Graduate Student Researcher

2012-2018

- Modeled galaxy cluster mass distributions using nonparametric methods
- Analyzed telescope observations to infer timeline of the early universe to highest precision at the time

## Education

---

### University of California, Davis

Davis, CA

Ph.D. in Physics

2012 – 2018

GPA: 3.81/4.00

### Colby College

Waterville, ME

Bachelor of Arts in Physics, with Honors

2008 – 2012

GPA: 3.80/4.00

## Skills

---

Python, Linux/Unix,  
Javascript, HTML, CSS

SQL, Flask, Django,  
Docker, Redis

Google Cloud Platform  
LaTeX, Git

## Awards

---

**2018:** Paul Brady-Charles Soderquist Graduate Fellowship, UC Davis

**2014-2017:** NASA Earth and Space Science Fellowship, Astrophysics

**2016:** Graduate Student Travel Award, UC Davis

**2014:** Summer Graduate Researcher Award, UC Davis

**2012:** Ray and Constance Chandler Fellowship, UC Davis

**2008-2012:** Dean's list, Colby College