

B Hunter Cornell

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Education:

B.S. Physics from University of California – Davis Graduated June 2018

Overall GPA 3.48 Physics GPA 3.50

Programming Languages:

- 3 Years Experience with command line, git, linux/unix, Python (numpy, scipy, matplotlib, scikit-learn, pandas), SQL, C/C++, Latex

Work Experience:

Textbook Solutions Manual Co-author | June 2018 - Present

- Writing solutions and developing figures in Latex for a solutions manual to a general relativity textbook written by my research mentor
- Chosen as one of two other writers based on previous displays of physics knowledge, writing skills, reliability, and dedication to all projects I work on
- Developing expertise in creating high quality written explanations of complex problems and ideas
- Providing and receiving constructive critiques to work as part of a team to develop useful, thorough solutions to all problems presented in the book

Cosmological Physics Research Assistant | June 2016 - Present

- Lead project data scientist and co-author of *Simulated Analogs of Merging Galaxy Clusters Constrain the Viewing Angle*; published August 2, 2018 to The Astrophysical Journal; Link: <https://doi.org/10.3847/1538-4357/aacf3e>
- First undergraduate in our scientific collaboration to ever contribute substantially to writing a peer-reviewed, published paper
- Query, clean, and analyze data while using physics knowledge to determine how to filter and find relevant data
- Experimented with different project directions based on new data and advice from others in my research group
- Run probability and statistical analysis to find useful information within data
- Research current observational cosmology data to compare, create, and understand results
- Create visualizations and write published analysis to explain methods and conclusions
- Currently leading a second project providing a further analysis on galaxy clusters using simulation data to understand relaxation times as galaxy clusters evolve

Electronic Physics Lab Assistant | UC Davis Physics Department | Jun 2017 - Aug 2017

- Demonstrated and developed lab projects for classroom physics labs
- Troubleshoot electronic equipment and circuits
- Helped develop electronic circuits used in labs
- Effectively explained set-ups and trained instructors in how to perform experiments for class use

Participant in HackDavis 2018 | January 2018

- Member of a 4 person team that created a web applet using Google Cloud Vision API and Python in under 24 hours when nobody in our team had any experience with Google Cloud APIs
- Demoed a program that recursively extracted, processed, and organized data from images of text
- Worked effectively as a team player

Desk Supervisor | UC Davis Libraries | Davis, CA | November 2017 - June 2018

- Promoted from Student Assistant
- Supervise 20+ employees while providing data management support for library catalog maintenance
- Train new employees, create training manual material, digitise and optimise library processes

Circulation Student Assistant | UC Davis Libraries | Davis, CA | Nov 2015 - Nov 2017

- Given title of Mentor Student after 5 months, where I was in charge of creating training manuals, giving input on hiring, scheduling employees, and leading groups of up to 4 other employees on cleaning, data entry, and organizational tasks
- Provided excellent customer service
- Fostered a productive, happy workplace environment by keeping an optimistic attitude and placing importance on having a caring group of coworkers
- Followed library protocols and efficiently transferred tasks and questions to more capable or knowledgeable workers when needed

Food Service Student Assistant | UC Davis Dining Commons | Nov 2014 - Mar 2015

- Work efficiently in high-stress, fast-paced environment
- Learned to compartmentalize and prioritize tasks to provide service in a timely manner

Grocery Store Box Person | Jensen's Finest Foods | Wrightwood, CA | May - Sep 2014,
May - Sep 2015

- In charge of opening and closing my department, which involved cleaning, organizing product, locking store rooms, and helping other employees
- Worked overnight shifts to help prepare for emergencies from nearby forest fires
- Supervised product deliveries and helped organize teams to unload and stock shelves