

Davis M. Catolico

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Education

Claremont McKenna College - Claremont, CA

May 2018

Bachelors of Arts in Neural Engineering, Minor in Computer Science

Previous Courses: Molecular Neuroscience, Linear Algebra, Digital Electronics & Computer Engineering, Functional Anatomy & Biomechanics, Principles of Physics, Computational Neuroscience, Principles of Computer Science, Biomedical Engineering, Mathematical Biology

Current Courses: Cognitive Neuroscience, Data Structures, Big Data, Project Management

Technical Skills: Java, Python, C, C++, Matlab, XPPAUT, Microsoft Office, LaTeX, Drupal, Wordpress, HTML, CSS, KiCad, Verilog, Arduino, Clinical Data Management

Lab skills: Cadaver dissection, pipettes, PCR, IHC, bacterial cultures, genetic transformation, titrations

Certifications: *Oregon BioScience Association* – Data Integrity, Overview of FDA Requirements, Quality Systems Overview, Preparing for Inspections in a Regulated Industry

Experience

Oregon Health Science University – Portland, OR

May 2017 - August 2017

Quantitative Bioscience and Biomedical Engineering Intern | Software Developer

- Developed software in Python to refine cryo-electron microscopy maps to high resolution x-ray crystallography models. Used to better predict molecular structures using real-space refinement
- Under guidance of Dr. Michael Chapman

Student Technology Assistant Team – Claremont, CA

August 2016 - Present

Residential Technology Assistant

- Serve as primary technology help desk for residents, solved and documented 50+ technology issues

Backyard Brains - Ann Arbor, MI

May 2016 - August 2016

Research and Development Intern

- Designed an Arduino-based device to record and manipulate bioelectric signals of weakly-electric fish
- Created a cost-effective research tool-kit targeted to neuroscience educators and students

Claremont McKenna Office of Public Affairs - Claremont, CA

August 2015 - Present

Web Design Intern

- Refurbish site architecture and content for cmc.edu and 7 on-campus institutions in HTML, CSS, Drupal

Casa Colina Hospital and Centers for Healthcare - Pomona, CA

June 2015 - June 2016

Clinical Research Assistant - Project Manager

- Evaluated clinical efficacy of Smart Socks by Sensoria Fitness, a technology developed for runners
 - Managed a team of 8 student researchers and physical therapists to run over 100 clinical trials
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Activities and Awards

Camp Kesem Coordinator Board – *Director*

August 2017 - Present

Claremont-Mudd-Scripps Varsity Track and Field - *Jumper and Sprinter*

2014 - Present

Camp Kesem Coordinator Board – *Treasurer*

March 2017 - August 2017

5C Hackathon – Advanced Section - 3rd Place

April 2016

- *Braintense*: Designed in Rubygame, this game interfaces with an electromyography (EMG) circuit and electroencephalography (EEG) headset to use brain waves and muscle flexion as input to control a character's movements.

5C Hackathon – Best Hack for Scaling Human Connection sponsored by Airbnb

November 2015

- *Dining2Know*: An alternative way to view dining options in Claremont, integrated with Instagram API
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Presentations and Publications

MID-SURE Poster Symposium - Michigan State University

July 2016

Neural Mechanisms of the Jamming Avoidance Response in the Weakly Electric Fish (Electric Fish Piano)

(Pending publication) - Casa Colina Hospital

June 2016

Evaluation of a Wearable 'Smart Socks' Gait Monitoring System for Improving Rehabilitation Outcomes