Garrett Flynn

Undergraduate Researcher & Aspiring Neural Engineer

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EXPERIENCE

Research Assistant
Hires Lab ↗

08/2017 – Present   *Los Angeles, CA*

Our lab's long term goal is to understand neural circuit mechanisms that underlie sensorimotor coding, integration, and learning, which could guide the creation of more effective treatments for neurological disorders.

Tasks
- Currently managing our machine learning pipeline for data curation (after volunteering to learn ML during my first semester)
- Collaborated with Jonathan Sy to publish "Automatic Curation of Mouse Whisker Contacts using Convolutional Neural Networks" (forthcoming)
- Designed and assembled a novel experimental rig for object discrimination tasks
- Prepared (via surgery) & trained mice for head-fixed discrimination tasks
- Curated data from tactile discrimination experiments.

Contact: Andrew Hires – shires@usc.edu

Undergraduate Researcher
Song Lab ↗

12/2018 – Present   *Los Angeles, CA*

Our lab is developing the computational basis (i.e. mathematical model) for a hippocampal memory prosthesis, which could become a novel treatment for dementia.

Achievements/Tasks
- Collaborated with Xiwei She to publish "Enhancing Biomimetic Model Estimation with Parallel Computing" (forthcoming)

Contact: Dong Song – dsong@usc.edu

EDUCATION

Computational Neuroscience (B.A.)
The University of Southern California

2017 – 2021   *GPA: 3.79*

Courses
- BME 210 - Biomedical Computer Simulations
- MATH 226 — Calculus III
- IML 385 — Design Fiction and Speculative Futures
- CORE 103 — Darwin and Darwinism

HARD SKILLS

MATLAB
● ● ● ● ○

Python
● ● ○ ○ ○

Machine Learning
● ● ○ ○ ○

ACHIEVEMENTS

USC Provost's First Generation Undergraduate Research Fellowship (2018)
Awarded during Summer 2018 for research in Hires Lab.

USC Resident Honors Program (2017)
A highly-selective program at USC that allows high school juniors to enter college a year early.

Yale Young Global Scholars (2016)
Created and presented a capstone project on Nanorobots for Wound Healing while attending seminars with exceptional high school students from around the world.

INTERESTS

Cortical Prostheses   Blogging

Systems Thinking   Meditation