

# NICK TOPPER

SOFTWARE ENGINEER - UNIVERSITY OF FLORIDA - EXPECTED GRADUATION MAY 2016

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## EXPERIENCE

### AMAZON.COM

#### SOFTWARE DEVELOPMENT ENGINEER INTERN - SUMMER 2015 - AMAZON PUBLISHING

- Designed and created a new file management service
- Enabled asynchronous uploading and processing of files and associated metadata

### UNIVERSITY OF FLORIDA

#### RESEARCH SPECIALIST - FALL 2013 TO PRESENT - DEPARTMENT OF NEUROSCIENCE

- Developed and published new methods and tools for specific and general research problems
- Assisted with a broad range of technology related challenges, such as automating data analysis tasks, creating automated "rat mazes" for particular experiments

## PUBLICATIONS

### "MULTIPLE FREQUENCY AUDIO SIGNAL COMMUNICATION AS A MECHANISM FOR NEUROPHYSIOLOGY AND VIDEO DATA SYNCHRONIZATION"

Nick Topper, Andrew P Maurer Ph.D, Sara N. Burke Ph.D

- Presented in this paper is a new method for synchronising electrophysiology and video data collected in parallel.
- This is useful for researchers who wish to correlate behavioral events recorded on video with physiological events recorded with other acquisition equipment.

## PROJECTS

### OPERANT CONDITIONING CHAMBER WITH ADMINISTRATION OF CANNABIS

#### IN PROGRESS - SPRING 2015

Wiring, Python, Django, some electrical and mechanical engineering

- Designed a device which allows for the administration of cannabis smoke, based on adjustable experimental parameters.
- This design won a grant from the National Institute of Health.
- I supervise a cross-discipline team of three engineering students who are implementing my design of the physical hardware, and serial communication protocol.
- This project also features a web server accessible over a wireless network which will give experimenters the ability to remotely monitor, retrieve data, and adjust experimental parameters without coming in contact with controlled substances.

### COLLECTOR/MINION

#### IN PROGRESS - FALL 2014

Python, Py2Exe, Tkinter, OpenCv

- Developing a software suite which will be used to assist in the collection and analysis of video data for a particular test commonly used in biopsychology with the rodent model.
- This design won a grant from the National Institute of Health.
- This project will be presented at the 2015 Society for Neuroscience conference.

### KITCHEN SYNC

#### FALL 2013 - SPRING 2014

Python, Scipy, Wiring

- Developed software application of the method described in "Multiple Frequency Audio Signal Communication as a Mechanism for Neurophysiology and Video Data Synchronization"

### MOLAR MASS FOR WINDOWS 8

#### FALL 2012

Windows 8, Javascript, HTML5

- Developed a visually attractive molar mass calculator tool for the Windows 8 app store.

## PERSONAL

- Officer in the University of Florida Student Infosec Team
- Competitor in various CTF events, will be involved in enterprise defence competitions
- Has a Welsh Corgi puppy named Falafel
- Maker enthusiast with various Arduino/Raspberry Pi projects
- Previous background in film/video production
- Once ate an entire pizza
- Participated in NASA rocketry competition in 2013
- Previous background in real estate and property management
- My parents were professional clowns when I was born

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