Michael Urich

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EDUCATION

UNIVERSITY OF PITTSBURGH

BEng in Electrical Engineering
Expected Dec 2017 | Pittsburgh, PA
Conc. in Communications/Signal Processing
Swanson School of Engineering

LINKS

Github: **mike-u**
LinkedIn: **mikeurich**
Devpost: **mikeurich**

COURSEWORK

UNDERGRADUATE

Analog Communication Systems
Quantitative Systems Neuroscience
Analysis and Design of Electronic Circuits
Signals and Systems Analysis
Music Engineering

SKILLS

COMPUTING

Matlab • Python • HTML/JS
VHDL• Arduino • Java
Git • Linux • LaTeX

DESIGN

SolidWorks • Altera Quartus
Autodesk Inventor • GIMP

HACKATHONS

PennApps (Sep 2016)
Steelhacks (Feb 2016)
PittApps (Jan 2016)

- Organized for approx 40 students who could not attend PennApps due to weather

MHacks (Jan 2015)

RESEARCH

LABORATORY FOR COMPUTATIONAL NEUROSCIENCE

Undergraduate Research Assistant
Mar 2016 – Present | Pittsburgh, PA
Working under supervision of Dr. Zhi-Hong Mao to develop a system for detecting eye saccades and blinks through a wearable EEG headset to create an eye-tracking keyboard, which will allow paraplegic patients to communicate without custom modifications to consumer devices. Independently developed support vector machine in Matlab for saccade direction recognition. Publication to be submitted.

PITT NEUROBIOLOGY DEPARTMENT

Undergraduate Research Assistant
Mar 2015 – Sep 2015 | Pittsburgh ,PA
Worked with Dr. Bryan Hooks with Matlab and ImageJ to develop a novel method of quantifying neuronal connectivity in the motor and sensory cortices of the mouse brain. Publication accepted to BMES 2015 Annual Meeting.

PROJECTS

DESIGN HUB | Webmaster, Club officer

Jan 2015 – present

- Worked with team of undergraduates to develop Design Hub site
- Part of core group of undergraduates planning workshops and coordinating design teams

DYNASTIM

Jan 2014 – May 2015

- Worked with a team of undergraduates and doctors on an electrophysiology control device for deep brain stimulation
- Competed in several design and entrepreneurial competitions, progressed to final round of Randall Family Big Idea competition
- Applied for provisional patent

THEREMIND

Steelhacks project

- Worked with friends to develop ThereminD, an EEG headband that plays music based on brain signals with theremin-style controls. Used Muse headband integrated wtih Matlab for data acquisition as well as signal processing.

AWARDS

2015 First place at Senior Design Expo, Dynastim project
2014 First place at Senior Design Expo, Dynastim project
2014 BK Simon Family Scholar