Mark Edmonds

http://mjedmonds.com | mark@mjedmonds.com | 913.284.1418

EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES
PhD in Computer Science
Expected Spring 2020

UNIVERSITY OF CALIFORNIA, LOS ANGELES
MS in Computer Science
Grad. June 2017
Cum. GPA: 3.71

UNIVERSITY OF DAYTON
BS in Computer Engineering
Grad. May 2015
Cum. GPA: 3.87
Magna Cum Laude
Leadership in Flyer Innovations
Chief of Innovation
Chief of Operations

LINKS

Github:// **mjedmonds**
LinkedIn:// **mjedmonds**

COURSEWORK

GRADUATE
Pattern Recognition and Machine Learning
Learning and Reasoning with Bayesian Networks
Statistical Modeling and Learning in Vision and Cognition
Artifical Life
Teaching Assistant
Introduction to Computer Science

UNDERGRADUATE
Artificial Intelligence
Operating Systems
Automata Theory
UNIX/Linux Programming
Teaching Assistant
Electronic Devices Lab
Engineering Innovations

SKILLS

PROGRAMMING
Over 5000 lines:
C++11 • C • Python • Shell • LaTeX
Over 1000 lines:
Java • Matlab • CUDA
Familiar:
Assembly

RESEARCH

CENTER FOR VISION, COGNITION, LEARNING, AND AUTONOMY
Graduate Researcher — Los Angeles, CA | Sept 2015 – Present

Transferred visually latent causal changes from a human demonstrator to a robot using a tactile glove and an And-Or graph. The robot improves its online policy using demonstrations and reinforcement learning. Deployed robot localization on a ROS-based Baxter robot using SLAM, wheel odometry, and IMU data, combined using Kalman filtering.

AIR FORCE RESEARCH LAB
Undergraduate Researcher — Dayton, OH | May 2014 – Sept 2015

Accelerated the declarative memory module of AFRL's CECEP cognitive architecture (based on ACT-R). The research focused on leveraging the parallelization of CUDA, yielding a 100x speedup over the fastest existing implementation. Utilized thread pools, parsers, IPC.

EXPERIENCE

SANTA MONICA COLLEGE
Adjunct Professor — Santa Monica, CA | June 2016 - Present

- Teaching CS 80, Internet Programming, a class focused on HTML, CSS, JavaScript, MySQL, and PHP.

GARMIN
Software Engineering Intern — Olathe, KS | May 2013 – Aug 2013

- Interned as a member of the Datalink team in the Aviation Department.
- Reduced verification testing time by 40%.

CRISTO REY KANSAS CITY HIGH SCHOOL
Tutor and Teacher — Kansas City, MO | May 2011 – Aug 2012

- Pre-calculus and chemistry tutor and teacher at an inner city high school.

PUBLICATIONS

M. Edmonds*, F. Gao*, X. Xie, H. Liu, S. Qi, Y. Zhu, B. Rothrock, & S.C. Zhu
Learning Complex Functional Manipulations by Human Demonstration and Fluent Discovery. IROS 2017.

H. Liu*, X. Xie*, M. Millar*, **M. Edmonds**, F. Gao, Y. Zhu, V. Santos, B. Rothrock, & S.C. Zhu
A Glove-based System for Studying Hand-Object Manipulation via Pose and Force Sensing. IROS 2017.

M. Edmonds, T. Atahary, S. Douglass, & T. Taha
Hardware Accelerated Declarative Memory Systems. Submitted to TPDS 2017.

M. Edmonds, T. Atahary, T. Taha, & S. Douglass.
High Performance Declarative Memory Systems through MapReduce. SNPD 2015.

D. Prince, **M. Edmonds**, A. Sutter, M. Cusumano, W. Lu, & V. Asari.
Brain Machine Interface using Emotiv EPOC to control Robai Cyton Robotic Arm. NAECON 2015.

(* Joint first authors)

SOCIETIES AND AWARDS

2015	University	The Anthony Horvath and Elmer Steger Award of Excellence
2014	National	Eta Kappa Nu IEEE Honor Society
2014	National	Tau Beta Pi Engineering Honor Society
2011	Boy Scouts	Eagle Scout with over 200 hours of community service