

Mark Edmonds

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EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES

MS IN COMPUTER SCIENCE
Expected Spring 2017

UNIVERSITY OF DAYTON BS IN COMPUTER ENGINEERING

Grad. May 2015
Cum. GPA: 3.87
Major GPA: 3.93
Magna Cum Laude
Dean's List (7/8 Semesters)

Leadership in Flyer Innovations

Chief of Innovation 2014
Chief of Operations 2013

SHAWNEE MISSION EAST H.S. Grad. May 2011

LINKS

Github:// [mjedmonds](#)
LinkedIn:// [mjedmonds](#)

COURSEWORK

GRADUATE

Pattern Recognition and Machine Learning
Learning and Reasoning with Bayesian Networks

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

Deploying robot localization on a mobile Baxter robot using simultaneous localization and mapping (SLAM), wheel odometry, and IMU data. The sources are combined through extended Kalman filtering. The Baxter robot uses the Robot Operating System (ROS).

DECLARATIVE MEMORY

HEAD UNDERGRADUATE RESEARCHER

Dayton, OH | May 2014 – Sept 2015

Worked with **Dr. Scott Douglass** and **Prof Tarek Taha** to accelerate the declarative memory module of the CECEP cognitive architecture (based on ACT-R). The research focused on leveraging the parallel computing abilities of the CUDA programming platform. One publication published, another publication in writing.

ROBOTIC ARM BRAIN MACHINE INTERFACE

UNDERGRADUATE RESEARCHER

Dayton, OH | Aug 2014 – May 2015

Worked in a team of peers to expand the capability of a brain machine interface through EEG signals and a robotic arm. The team implemented additional gestures and improved the universality of the interface. Publication published.

EXPERIENCE

AIR FORCE RESEARCH LAB

UNDERGRADUATE RESEARCHER

Dayton, OH | May 2014 - Sept 2015

- Conducted Declarative Memory research in a cutting-edge research environment.
- Used CUDA to parallelize declarative retrievals, yielding a 100x speedup over the fastest existing implementation.
- Implemented thread pools, parsers, IPC.

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

- | | | |
|------|------------|---|
| 2016 | In Writing | Hardware Accelerated Declarative Memory Systems through CUDA |
| 2015 | SNPD | High Performance Declarative Memory Systems through MapReduce |

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 |