

# 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 •  $\text{\LaTeX}$

Over 1000 lines:

Java • Matlab • CUDA

Familiar:

Assembly

## RESEARCH

### CENTER FOR VISION, COGNITION, LEARNING, AND AUTONOMY

GRADUATE RESEARCHER

Los Angeles, CA | Sept 2015 – Present

Working to give a Baxter robot visual and wheel odometry using a Intel RealSense camera and a Dataspeed Baxter Mobility Base.

### 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           |
| 2015 | NAECON     | Brain machine interface using Emotiv EPOC for controlling a robotic arm |

## 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     |