

Matt Furtney

Website: MattFurtney.com | 1-321-421-9271 | mfurtney@nomad-flights.com

OBJECTIVE

Deploy technologies that augment human connectivity.

EDUCATION

MAS Media Arts and Sciences, Massachusetts Institute of Technology June 2016
Media Lab: Biomechatronics

B.S. Biomedical Engineering, University of Miami May 2013
Second Major in Computer Science
Cumulative GPA 3.82

WORK EXPERIENCE

Nomad Flights LLC June 2016 - present
Chart-based flight itinerary search www.nomad-flights.com
Founder

- Developed back end server
- Developed chart-based mobile-first user interface

Northrop Grumman Corporation May - August 2012
Technical Services Division | Warner Robins, GA
Undergraduate Software Engineering Intern

- Developed GUI widget for Operational Flight Program Integrated Testing Environment
- Electronic Warfare Radar Software Development
- Assembly Code Upgrade Study
- Exposure to program management techniques and strategies

RESEARCH EXPERIENCE

Massachusetts Institute of Technology September 2013 - May 2016
Biomechatronics | Media Lab | PI: Dr. Hugh Herr
Research Assistant

- Overall Lab focus: Overcome disability through technology
- Improved computational efficiency and speed of Endo-Herr walking model optimization
- Synchronized data collection between VICON and prototype SRI exoskeleton at the millisecond scale (DARPA)
- Masters thesis: designing a dynamic model of human walking that accurately predicts metabolism and kinematics at multiple walking speeds—to be used for the control system and design of exoskeletons and leg prostheses (Army Research Grant)

University of Miami February - August 2011
Neuroprosthetics | Department of Biomedical Engineering | PI: Dr. Justin Sanchez
Undergraduate Research Assistant

- Lab focus: Brain-machine interface driven by primary motor cortex with feedback from Nucleus Accumbens using implantable microelectrode arrays in non-human primates (DARPA funded)
- Used Tucker Davis Technologies Neural Recording Systems
- Acted as non-sterile assistant for electrode implantation surgery
- Experience with sterile protocol
- Validation of 3D magnetic tracker system

LEADERSHIP

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MIT | Delta Kappa Epsilon

August 2014 - May 2016

Resident Advisor

- Advised a house of 36 MIT student residents, predominantly student athletes
- Promoted safety at large house gatherings and events

MIT | Undergraduate Research Opportunity (UROP) program

February 2014 - December 2015

Leader

- Managed 4 undergraduate MIT students on independent research projects

UM Emergency Response Team CERT

January 2010 - January 2011

Executive Board Administrator

- Held executive board leadership role for training students to respond to and take control of mass casualty disaster scenarios
- Weekly Board Meetings
- Emergency Response Team leader during select drill days. Directed back-boarding, wounded transport, and triage

SELECTED COURSEWORK

- | | | |
|---------------------------|------------------------|---------------------------|
| ○ Computer Architecture | ○ Software Engineering | ○ Human 2.0 |
| ○ Computer Algorithms | ○ System Programming | ○ Computer Security |
| ○ Artificial Intelligence | ○ Intro to Robotics | ○ Patent Law Fundamentals |
| ○ Theory of Computing | ○ Machine Learning | ○ Entrepreneurship |

TECHNICAL EXPERIENCE

Languages

- | | | |
|--------------|--------|------------|
| ○ Javascript | ○ Java | ○ CSS |
| ○ Python | ○ C++ | ○ Assembly |
| ○ Matlab | ○ C | |
| ○ Simulink | ○ HTML | |

Coding Environments

- | | |
|-----------|---------------------------------|
| ○ QT | ○ Windows Visual Studio Express |
| ○ Eclipse | ○ Sublime Text |
| ○ VIM | |

Concepts

- | | | |
|---------------------------|----------------------|-------------------|
| ○ Agile Development | ○ Circuit Design | ○ Neural Networks |
| ○ SCRUM | ○ Cloud Computing | ○ Particle Swarm |
| ○ Artificial Intelligence | ○ Genetic Algorithms | |

Tools

- | | | |
|-----------------------------|-----------------------|--------------------------|
| ○ Vicon Motion Capture | ○ Amazon Web Services | ○ Aatah Pro (UML design) |
| ○ Cosmed Metabolic Analysis | ○ GIT, SVN | |

INTERESTS

- | | | |
|--------------------------------|---------------------------|------------------------|
| ○ Human Augmentation | ○ Artificial Intelligence | ○ Transport Efficiency |
| ○ Astronautics and Aeronautics | ○ Linguistics | ○ Reading |
| | ○ Collective Intelligence | ○ Science Fiction |