Zachary Barnes

zbarnes@stanford.edu | 858.412.9208

EDUCATION

STANFORD UNIVERSITY
MS in Computer Science
Field: Artificial Intelligence
Expected Spring 2018 | Palo Alto, CA

UNIVERSITY OF PITTSBURGH
BS in Computer Engineering
April 2016 | Pittsburgh, PA
GPA: 3.98 / 4.0

LINKS

GitHub:// zabarnes
LinkedIn:// zabarnes1
DesignHub:// pittdesignhub.com

COURSEWORK

MASTERS
Artificial Intelligence
Machine Learning

UNDERGRADUATE
Systems Software • Algorithms
Data Structures • Signals and Systems
Computer Org. • Computer Arch.

SKILLS

PROGRAMMING
Knowledgeable:
Java • C • Matlab •Python • R
Familiar:
HTML • JavaScript • UNIX

HARDWARE
Arduino • BeagleBone Black
Raspberry Pi • FPGA

AWARDS

2015 Goldwater Scholar
Johns Hopkins SRE Fellowship
Health Innovators Fellowship
NSF REU Fellowship
University Scholar (top 2%)
University Honors Scholarship
Dean's List (All Semesters)

SOCIETIES

Tau Beta Pi

TECHNICAL EXPERIENCE

MACHINE LEARNING FOR PATIENT PROGNOSIS | SRE Fellow
Johns Hopkins University, Suchi Saria Lab | May 2015 - Sep 2015
Development of clinician-facing application utilizing a subtyping, machine learning model to predict lung function in Scleroderma patients at Johns Hopkins Hospital. Overseen by Dr. Suchi Saria and part of the JHU Summer Research Expeditions (SRE) program.

- Placed 2nd in JHU SRE summer research conference.

VERIFICATION OF CYBER-PHYSICAL SYSTEMS | CMU CS 15-424
Carnegie Mellon University, Logical Systems Lab | Aug 2014 - Dec 2014
Research course project on developing a verifiably safe and efficient controller for using multiple robotic arms in surgery. Under the guidance of Dr. Andre Platzer at CMU.

- 1st place individual at CMU CPS Validation and Verification Grand PRIX.

MOBILE CYBER-PHYSICAL SYSTEMS DEVELOPMENT | NSF REU
University of California-San Diego | May 2014 - Aug 2014
National Science Foundation's Research Experience for Undergraduates Fellowship led by Dr. Ryan Kastner, Dr. Curt Schurgers, and Dr. Albert Lin.

- Development of a Mobile Aerial Platform for Remote Tracking of Radio Collars using digital signal processing and software defined radio. Deployed by biologists in the Dominican Republic.
- Implementation of a Crowd-Sourced Machine Learning Framework for Classification of Plankton using support vector machines and a web application.
- Work published in the 2014 IEEE International Conference on Mobile Ad hoc Sensor Systems

LEADERSHIP & OUTREACH

DESIGNHUB | Co-Founder
University of Pittsburgh | Mar 2013 - Apr 2016
University organization creating innovative solutions through student teams, often with partnerships with physicians or industry.

- Finalists in H.G. Wells Competition and Randall Big Idea

THE ART OF MAKING | Instructor and Co-Founder
University of Pittsburgh | Oct 2014 - Apr 2016
Acquired approval, developed concept, content, and operation of new honors freshman engineering class based on system design and engineering, including teaching and grading during the semester.

SEMFS | Co-President
Swanson School of Engineering | Jan 2014 - Apr 2016
Scientists, Engineers, and Mathematicians for Service provide STEM outreach to local K-12 students

- Organized and hosted Pitt Science Day 2015 with over 100 students, chronicled in the Pitt News

PUBLICATIONS

Santos, Gilberto, Zachary Barnes , Ryan Kastner et al. "Small Unmanned Aerial Vehicle System for Wildlife Radio Collar Tracking." In Mobile Ad Hoc and Sensor Systems (MASS), 2014 IEEE 11th International Conference on, pp. 761-766. IEEE, 2014.