Zaid Ashai

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Resume

EDUCATION

2017-2019 **University of Michigan Ann Arbor**, 500 S State St, Ann Arbor, MI 48109 ph: (734) 764-1817
Masters of Science (**Robotics**)

2013-2016 **Johns Hopkins University**, 3400 N Charles St, Baltimore, MD 21218 ph: (410) 516-8000
Bachelor of Science in Engineering (**Biomedical Engineering**), Dean's List '13-15, GPA = 3.25

SKILLS

Coding **Java** (6 years), **Matlab** (3 years), **Python** (1 year), Arduino (1 year), **C++** (0.5 years).

CAD SolidWorks (6 years), AutoCAD (2 years), Altium (0.5 years), V-REP (0.5 years).

PUBLICATION

June 2017 Allen Feng, Christopher Razavi, Pranav Lakshminarayanan, **Zaid Ashai**, Kevin Olds, Marcin Balicki, Zhen Gooi, Andrew Day, Russell Taylor, Jeremy Richmon "The Robotic ENT Microsurgery System: A Novel Robotic Platform for Microvascular Surgery" *The Laryngoscope* DOI: 10.1002/lary.26667

CONFERENCE PAPERS

Mar 2016 Robert Beaulieu, Rahul Yerrabelli, **Zaid Ashai**, Rahul Kaliki; "Novel Tool for Measuring Compensatory Shoulder Movements in Upper Extremity Amputees with Myoelectric Prosthetics" *American Orthotic and Prosthetic Association Conference*

Nov 2015 Allen Feng, Pranav Lakshminarayanan, **Zaid Ashai**, Kevin Olds, Marcin Balicki, Russell Taylor, Jeremy Richmon; "The Robotic ENT Microsurgery System (REMS): Feasibility of a Novel Robotic Platform for Microvascular Surgery" *American Academy of Otolaryngology-HNS*.

PROVISIONAL PATENT

Filed 2014 "Textured Endotracheal Tube Cuff with Mucosal Adhesive" (Ref. No. 61/988,876)
Inventors: Simon Ammanuel, **Zaid Ashai**, Paul Danielson, Nicole Chandler, et al.

RESEARCH

Summer 2015 **Software Engineer** at Infinite Biomedical Technologies, founded by Dr. Rahul Kalicki, CEO

Developing a Prosthetic Hand Assessment Method (PHAM) to Evaluate Prosthetic Hand Motions of Amputees for Occupational Therapy, Using a Standard Precision Clip Test

Responsibilities included: programming a GUI for PHAM using **Python** and **Arduino**, building a mechatronic prototype, and testing PHAM with amputee subjects fitted with prosthetic hands.

Measuring Compensatory Shoulder Movements in Upper Limb Amputees with Myoelectric Prostheses

Responsibilities included: integrating PHAM with a system of IMU sensors attached to an amputee, analyzing IMU data of prosthetic hand motions in **Python**, conducting initial tests comparing motions of two amputees with six able-bodied subjects, and presenting preliminary findings to graduate students and doctors at Johns Hopkins University.

2015-2016 Prototype Design Engineer at the Laboratory for Computational Sensing and Robotics, led by Dr. Russell Taylor, Director of Engineering Research Center for Computer-Integrated Surgical Systems and Technology

Redesigning the Tremor-Reducing Robotic ENT Microsurgery System (REMS) for Vein Anastomosis

Responsibilities included: designing robot-compatible needle holders in SolidWorks, building prototype needle holders in machine shop, troubleshooting REMS steady hand algorithms in **C++**, and conducting pilot studies on the REMS with ten medical student subjects.

2014-2015 Co-founder of Stech Cuff, Johns Hopkins University, Center of Biomedical Innovation and Design

Improving the Efficiency of Pediatric Ventilation through Novel Endotracheal Tube (ETT) Cuffs

Responsibilities included: developing CAD files of ETT cuffs using SolidWorks and AutoCAD, constructing rapid prototype designs, testing and evaluating designs *in vitro* and *in vivo*, working with a team of undergraduates and doctors, and presenting results at business plan competitions.