

# adam setapen

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## statement

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I am a computer scientist and roboticist who is passionate about making software and products that are easy to use and self-improving. With over ten years of concentrated academic research and real-world experience bringing consumer robots to market, I have become an expert in building and programming intelligent electromechanical systems. I thrive in environments that emphasize learning and collaboration, in which I can fully devote my skills to products and causes I care about.

## education

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**Massachusetts Institute of Technology** **September 2010 - August 2012**  
M.S., Media Arts and Sciences, Personal Robots Group @ MIT Media Lab

**University of Texas at Austin** **August 2005 - May 2010**  
M.S., Computer Science. concentration in Artificial Intelligence, minor in Cognitive Science  
B.S., Turing Scholars Honors Computer Science

## experience

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**r-bots, LLC** **San Francisco, CA** **July 2016 - Present**  
*President, Independent Consultant*

- ▶ Rapid prototyping of hardware and software (Python, C, iOS, Android)
- ▶ Clients include Project 100, Momentum Machines, Formlabs, FamBots

**AltSchool, PBC** **San Francisco, CA** **October 2015 - July 2016**  
*Lead Hardware Engineer*

- ▶ Created and maintained hardware devices to help educators and students in K-8 classrooms
- ▶ Led the hardware team to build prototypes of cameras, microphones, smart tables, wearables

**3D Robotics, Inc.** **Berkeley, CA** **September 2014 - October 2015**  
*Robotician*

- ▶ Scene Awareness Lead, designing and implementing computer vision tracking algorithms
- ▶ Implemented a hardware-accelerated iOS video pipeline (h264 RTP) and OTA firmware update system
- ▶ Embedded systems integration, development of test software for use in manufacturing and production

**Romotive, Inc.** **San Francisco, CA** **October 2012 - March 2014**  
*Robotician*

- ▶ Technical lead on machine learning and human-robot interaction
- ▶ Designed and implemented a computer vision framework for iOS harnessing OpenCV and GPU filters
- ▶ Lead the design, implementation, and documentation of a robotics SDK for iOS developers
- ▶ Implemented bleeding-edge facial detection (GPU based Viola-Jones), facial recognition (local binary patterns), persistent memory system, scripted interaction environment, audio pitch recognition and synthesis



## Teaching Assistant to Neil Gershenfeld

- ▶ Helped to run and teach the hands-on crash course on personal fabrication
- ▶ Taught students skills such as computer-controlled cutting, molding and casting, basic electronics

## publications

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Adam Setapen. **Creating Robotic Characters for Long-Term Interaction.** *Masters thesis, MIT. Readers: Cynthia Breazeal, Rosalind Picard, David DeSteno.*

Nadia Cheng, Maxim Lobovsky, Steven Keating, Adam Setapen, Katy Gero, Anette Hosoi, and Karl Iagnemma. **Design and Analysis of a Robust, Low-cost, Highly Articulated Manipulator Enabled by Jamming of Granular Media.** *2012 IEEE International Conference on Robotics and Automation (ICRA 2012).*

Natalie Freed, Jie Qi, Adam Setapen, Hayes Raffle, Leah Buechley and Cynthia Breazeal. **Sticking Together: Handcrafting Personalized Communication Interfaces.** *2011 ACM International Conference on Interaction Design and Children (IDC) 2011.*

W Bradley Knox, Adam Setapen, and Peter Stone. **Reinforcement Learning with Human Feedback in Mountain Car.** *In AAAI 2011 Spring Symposium - Help Me Help You: Bridging the Gaps in Human-Agent Collaboration., Palo Alto, CA - March 2011.*

Adam Setapen, Michael Quinlan, and Peter Stone. **MARIONET: Motion Acquisition for Robots through Iterative Online Evaluative Training (Extended Abstract).** *In The Ninth International Conference on Autonomous Agents and Multiagent Systems (AAMAS), May 2010.*

Adam Setapen, Michael Quinlan, and Peter Stone. **Beyond Teleoperation: Exploiting Human Motor Skills with MARIONET.** *In AAMAS 2010 Workshop on Agents Learning Interactively from Human Teachers (ALiHT), Toronto, Canada - May 2010.*

Adam Setapen. **Exploiting Human Motor Skills for Training Bipedal Robots.** *Undergraduate Honors Thesis/Technical Report HR-09-02. Adviser: Peter Stone.*

## invited talks

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**360iDev 2013**, Denver, 09.09.2013, *Your Code Just Ran Across The Floor.*

**Droidcon 2012**, Berlin. 03.14.2012. *The Robot In Your Pocket.*

## technical chops

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### Relevant Graduate Coursework:

Autonomous Robotics, Machine Learning, Cognitive Science, Natural Language Processing, Object Recognition, Affective Computing, Computational Neuroscience, Autonomous Multiagent Systems, Algorithmic Game Theory, Cryptography, Algorithms, Programming Languages, How to Make (almost) Anything, Sensor Applications for Interactive Environments, Technologies for Creative Learning

Programming Languages	Frameworks	Design	Electronics	Fabrication
C, C++, Python, Java, Swift, Objective-C, Lisp	ROS, iOS, Android, MATLAB, Eclipse	SolidWorks, AutoCAD, Rhino, Maya, Adobe Suite, Eagle PCB	Sensor prototyping and integration, power regulation and management, motor controllers	CNCs, mills, lathes, laser cutters, waterjets, 3D printers (SLA, SLS, FDM, MJM), mold making