JEREMY K. SCOTT

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EDUCATION

SM, PhD in Computer Science - CGPA 5.0   2010-Present
Department of EECS, Massachusetts Institute of Technology   Cambridge, MA
- Advisor: Randall Davis
- PhD Topic: Making algorithm description visual through sketching and direct manipulation
- SM Thesis: Understanding Sketch-and-Speech Descriptions of Physical Behavior

Bachelor of Applied Science (Hons), Engineering Science, Computer Option   2005-2010
Faculty of Applied Science and Engineering, University of Toronto   Toronto, ON
- Advisor: Khai N. Truong
- Thesis: Foot-based Interaction for Eyes-and-Hands-Free Mobile Interaction

PROFESSIONAL EXPERIENCE

Research Assistant, Advisor: Dr. Randall Davis   September 2010 – Present
Multimodal Understanding Group, MIT   Cambridge, MA
- *Phd Thesis:* Building a visual programming environment where an algorithm can be described by sketching and directly manipulating data structures.
  - Research goals: (i) making data and computation visual, (ii) direct manipulation to demonstrate steps, rather than building lines of code via drag and drop, (iii) encouraging abstraction
- *SM Thesis*: A sketching and direct manipulation interface for describing 2D physical behavior, for use in a game design tool or physics classroom smart whiteboard.

Undergraduate Research Assistant, Advisor: Dr. Khai N. Truong   September 2009 – June 2010
Toronto Ubiquitous Computing Research Group, University of Toronto   Toronto, ON
- *Foot-based Interaction Techniques*: Investigated foot dexterity while performing pointing tasks with the feet and determining a gesture set for foot-based mobile interactions
- *Sensing Foot Gestures from the Pocket*: Developed a machine learning approach to understanding foot gestures using accelerometer data from an iPhone placed in the user's pocket

Design Methodology and CAD Flow Engineer, PEY Internship   May 2008 – August 2009
System-on-Chip (SoC) Design Methodology Team, AMD Inc.   Sunnyvale, CA
- Developed design methodologies and internal software flows for logical IP construction, SoC floorplanning, STA constraint analysis and low-power design
- Interacted with developers and engineers in Shanghai and North America to assess needs, build in-house scripts and validation systems, perform product roll-out and support users

Image Processing Research Assistant, Advisor: Dr. Parham Aarabi   May – September 2007
Artificial Perception Laboratory, University of Toronto   Toronto, ON
- Developed image processing algorithms in C to detect anomalies (i.e. wrinkles, lesions) on the image of a face and report results, now used in *SkinMetrics* application marketed by *ModiFace* company
- Led team in field studies of usefulness of face visualization tools in the field of reconstructive surgery

Second Life Initiative Software Developer May – September 2007
OANDA Corporation, Online Foreign Exchange Company Toronto, ON
- Designed the company's presence on Second Life, in order to reach out to more online users
- Developed a virtual currency trading platform using Perl/SQL and in-world scripts to provide a trading UI, present pseudo-real-time exchange rates and handle trades made by users

Electrical and Microcontroller Subsystems Designer January - April 2007
Engineering Design Project, AER201, University of Toronto Toronto, ON
- Designed and implemented prototype of an inventory-checking robot, to autonomously record positions and liquid levels of oil drums
- Implemented PIC microcontroller assembly code to send, receive and process all control signals

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TEACHING EXPERIENCE

Teaching Assistant January – May 2013
6.813/6.831 User Interface Design and Implementation*, MIT* Cambridge, MA
- *Instructors*: Dr. Robert Miller and Dr. Haoqi Zhang
- Helped design in-class activities on a range of HCI topics, such as usability testing and graphic design
- Advised user-centered design group projects, which involved conducting user research before prototyping, testing and building a website
- Led weekly design studios, where students learned to critique and receive design feedback

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PUBLICATIONS

Scott, J. and Davis, R. 2013. PhysInk: Sketching Physical Behavior. (Accepted, to appear) In *Adjunct Proceedings of UIST 2013: The 26th ACM Symposium on User Interface Software and Technology*. (St. Andrews, UK, October 8 - 11, 2013).

Scott, J. 2012. Understanding Sketch-and-Speech Descriptions of Machines. MIT SM Thesis. Cambridge, MA, USA. September 2012.

Scott, J., Dearman, D., Yatani, K. and Truong, K.N. 2010. Sensing Foot Gestures from the Pocket. In *Proceedings of UIST 2010: The 23rd ACM Symposium on User Interface Software and Technology*. (New York, NY, USA, October 3 - 6, 2010). [18.4% acceptance rate]

AWARDS AND ACHIEVEMENTS

6.570 Mobile App Competition – 3rd Place January 2013
Massachusetts Institute of Technology Cambridge, MA

6.470 Web Programming Competition – Honorable Mention, Tier 1 January 2012
Massachusetts Institute of Technology Cambridge, MA

NSERC Postgraduate Scholarship – Master's Level (PGS M) July 2011- July 2012
Natural Sciences and Engineering Research Council of Canada Cambridge, MA

Professional Experience Year (PEY) Intern of the Year May 2009
Advanced Micro Devices (AMD), Inc. Sunnyvale, CA