

Anthony Poon

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Academic Interests

I am interested in the areas of ubiquitous computing (UbiComp), information and communication technologies for development (ICTD), social computing, and human-computer interaction (HCI). I believe that a socially-aware approach to creating pervasive and intimate technology can result in a transformative contribution to society. My past research involves combining skills from multiple disciplines to investigate novel uses of information technology and their impact in various social contexts.

Academic Background

Bachelor of Science in Computer Engineering, University of Washington, Seattle 2009

- Cumulative GPA of 3.79 / 4.0 in Computer Engineering coursework.
- Collegiate honors.

Bachelor of Arts in Sociology, University of Washington, Seattle 2009

- Cumulative GPA of 3.64 / 4.0 in Sociology coursework.
- Collegiate honors.

Employment History

Doctoral Student, Information Science, Cornell University 2016 – present

Software Development Engineer, Payments Platform, Amazon.com 2009 – 2016

- Served as a technical lead and senior developer on my team (Beach) and, in this role, mentored other developers, promoted code quality / design review processes, and architected major software components and features.
- Implemented features in Amazon's common user experience for checkout and payment method management (Payments Portal) to create a quality experience across all Amazon offerings.
- Architected a pluggable enterprise service bus platform (Decoupled Beach Services) which enabled business development teams to independently create and support integrations with third-party partners without compromising sensitive data.
- Conceptualized a system (Beach Online Controller) for management of web service messages and connectivity for reliable and scalable processing while maintaining quality of service and security.
- Designed a mocking service (Mock Banks) to enable distributed development and ownership of integration testing while encouraging behavior-driven development methodologies.
- Developed serialization and code generation tools (SDLIonSerializationTools, SDLJavaGenerator) to enable multiple teams to publish and share data types. With these tools, these types were made usable across different service APIs without data loss due to reserialization with old type definitions.
- Engineered a dynamic reverse proxy service (HarborService) for directing requests into Amazon while enabling distributed ownership and secure message handling.
- Created a framework for developing GUIs (Surfboard Framework) focused on modularity and model – view – controller design patterns which allowed teams to more easily build and maintain GUIs for their internal tools.

- Designed and curated a shared data modeling methodology (Common Beach Messages) to capture commonality between multiple partner interfaces, allowing clients to do minimal work for each new partner.
- Wrote software to integrate with new payment partners (NYCE/FIS and Adyen) which led to less expensive payments processing and new customers in new countries.
- Developed a method to normalize and enrich responses from a third-party collection partner (Arvato) to enable a consistent system for handling customers' bad debt.

Research Assistant, ASSIST Project, Computer Engineering, University of Washington 2007 – 2008

- DARPA-funded Advanced Soldier Sensor Information System and Technology project.
- Created a graphical interface for browsing and summarizing large and diverse data sets including GPS traces, photographs, audio, and event streams.
- Gathered data and field-tested a mobile system for capturing state and context of soldiers using the ASSIST tracking device.

Software Development Engineer in Test Intern, Windows Serviceability, Microsoft 2007

- Developed an automated testing tool to record daily comparisons of system binaries, their corresponding source changes, and the effects these changes would have on nearby binaries.

Teaching Assistant, Pre-Calculus, Summer Stretch Program, University of Washington 2005 & 2006

- Graded assignments and tests.
- Assisted students with questions.

Publications

Experiences with a Transportation Information System that Uses Only GPS and SMS 2010

- Ruth E. Anderson, Waylon Brunette, Erica Johnson, Caitlin Lustig, Anthony Poon, Cynthia Putnam, Odina Salihbaeva, Beth E. Kolko, Gaetano Borriello in *The International ACM/IEEE Conference on Information & Communication Technologies and Development (ICTD)*, London, UK, December 2010.
- <http://anthop.light-within.org/publications/2010 - Experiences with a Transportation Information System that Uses Only GPS and SMS.pdf>

Building a Transportation Information System Using Only GPS and Basic SMS Infrastructure 2009

- Ruth E. Anderson, Anthony Poon, Caitlin Lustig, Waylon Brunette, Gaetano Borriello, and Beth E. Kolko in *The International ACM/IEEE Conference on Information & Communication Technologies and Development (ICTD)*, Doha, Qatar, April 2009.
- <http://anthop.light-within.org/publications/2009 - Building a Transportation Information System Using Only GPS and Basic SMS Infrastructure.pdf>

Acculturation and the Educational Aspirations of the Children of Immigrants 2009

- Anthony Poon, BA thesis, Dept. of Sociology, University of Washington, Seattle, WA, April 2009.
- <http://anthop.light-within.org/publications/2009 - Acculturation and the Educational Aspirations of the Children of Immigrants.pdf>

MySMS: Connecting Developing Regions though SMS 2008

- Brad Campbell, Ruiho Li, Anthony Poon, and David St. Hilaire, BS capstone paper, Dept. of Computer Science and Engineering, University of Washington, Seattle, WA, June 2008.
- <http://anthop.light-within.org/publications/2008 - MySMS: Connecting Developing Regions Though SMS.pdf>

Patents

Remote Population and Redaction of High Security Data

patent pending

- Mathew Miller, Austin Brooks, Anthony Poon, and Elizabeth Coffin, US patent pending, 2015.

Awards and Honors

James Hewitt Endowed Scholarship, Computer Engineering, University of Washington 2005 – 2006

Mary Gates Endowment Scholarship, Honors Program, University of Washington 2004 – 2005

Academy for Young Scholars, University of Washington 2003

Skills

Computer Engineering

- Fluency in Java, PHP, Scala, XML, HTML, and WSDL.
- Proficiency in Perl, Python, SQL, C, JavaScript, and other languages.
- Designed, developed, and deployed distributed and scalable software systems, web-services, high-security software systems, and integrated hardware solutions.

Leadership

- Worked with large software development teams.
- Coordinated effort between multiple teams and organizations.
- Planned and prioritized effort to complete large projects.
- Implemented agile development methodologies, such as Kanban and Scrum.
- Mentored junior developers and other individuals.

Computer Proficiency

- Fluency in Linux command line, Microsoft Windows, and Apple OS X.
- Fluency in Microsoft OneNote, Word, Excel, PowerPoint, and Outlook.

Statistical Analysis

- Fluency in IBM SPSS and R.

Graphical Design

- Fluency in Adobe Photoshop, Illustrator, InDesign, and Flash.
- Fluency in AutoDesk Sketchbook.

Languages

- Fluency in Cantonese.
- Proficiency in Japanese.