Monica Liu

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EDUCATION	**University of Pittsburgh**, Pittsburgh, Pennsylvania, USA	Aug 2016 – Present
	PhD Student in Bioengineering, Neural Engineering	
	University of Virginia, Charlottesville, Virginia, USA	Aug 2011 – May 2015
	Bachelor of Science (B.S.) in Biology	
	Bachelor of Arts (B.A.) in Computer Science	

WORK EXPERIENCE

Novartis Institue for Biomedical Research, NX Informatics — Sep 2015 – Sep 2016
Data Engineer
- Develop software to support scientific research
- Supervisor: Dr. Nabil Hachem

University of Virginia, Center for Diabetes Technology — May 2014 – Jun 2015
Undergraduate Research Assistant, Breton Lab
- Assist in clinical trials and take the data collected to estimate insulin sensitivity
- Supervisor: Dr. Marc Breton

University of Virginia, Biology — Jun 2014 – May 2015
Undergraduate Research Assistant, Siller Lab
- Developed a MATLAB script to quantify axonal blebbing in fluorescent microscopy images
- Supervisor: Dr. Karsten Siller

University of Virginia, Biochemistry and Molecular Genetics — Mar 2011 – May 2014
Undergraduate Research Assistant, Taylor Lab
- Research into developing immunotherapies of cancer using flow cytometry to study mechanisms of action of monoclonal antibodies
- Supervisor: Dr. Ronald Taylor

PUBLICATIONS

M.J. Pokrass, M.F. Liu, M.A. Lindorfer, and R.P. Taylor, "Monoclonal Antibodies that Target Cell-associated HLA or β2- microglobulin Exhibit Differential Complement Activity: Implications for Cancer Immunotherapy," *Molecular Immunology*, vol. 56, no. 4, pp. 549–560, Dec 2013.

ACTIVITIES AND AWARDS

National Science Foundation, Graduate Research Fellowship Award, — Apr 2018

SciTech Days, University of Pittsburgh — Nov 2016
- Helped organize and teach bioengineering activities for middle and high school students at Carnegie Science Center's SciTech days.

Bevier Award, University of Pittsburgh — Oct 2016

Apache Spark 1.6.0, Open Source Contributor — Jan 2016

Madison House, University of Virginia

Medical Services – Acute Pediatrics — Aug 2013 – May 2015
- Bedside visiting for patients on the pediatric floor of the UVA hospital

Medical Services – Surgical Supply — Aug 2012 – May 2013
- Deliver surgical supplies to operating rooms and assist medical staff

Youth Mentoring - Gallery Volunteer — Jan 2014 – May 2014
- Teach children at the Virginia Discovery Museum about the science exhibits

Youth Mentoring – Music Resource Center — Aug 2012 – May 2013
- Teach piano and music theory to underprivileged students

Association of Computing Machinery, University of Virginia — Sep 2013 – Sep 2014
- Helped organize high school programming contest for Charlottesville-area high schools

International Collegiate Programming Competition,
University of Virginia, Competitor — Aug 2014 – Dec 2014
- Participated as a competitor on a team of three to solve algorithmically challenging problems in a time-constrained environment

PROJECTS AND RELEVANT COURSEWORK

Programming Languages: Implemented lexer in Javascript, parser in Ruby, type-checker in Haskell, and interpreter in OCaml for a subset of Java.

Computer Graphics: Implemented raytracer, scanline rendering, shaders, and other components of a graphics libraries in Python.

Web and Mobile Systems: Used Android voice recognition API to build speech therapy application integrated with Raspberry Pi controlled LEDs in Python, Java, PHP, Javascript, and html.