(206) 902 8185 **Krittika Joannah D'Silva** kdsilva@uw.edu
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EDUCATION

University of Washington, Seattle Graduation: June 2016

- Bachelors of Science in Computer Engineering with Honors
- Bachelors of Science in Bioengineering with Honors

RESEARCH EXPERIENCE

Information and Communication Technology for Development Laboratory, University of Washington (UW). Undergraduate Researcher. Advisor: Gaetano Borriello (June 2013 – June 2015): My team worked on building software applications for low-income regions around the world. I built an Android application that enabled a low cost diagnosis of infectious diseases using paper-based microfluidic tests at the point of care, during a single clinic visit.

Microsoft Research. Research Intern on the Technology for Emerging Markets team. Bangalore, India. Advisor: William Thies (Summer 2014): My team was focused on developing technologies to address the needs and aspirations of people in the world's developing communities. My work was focused on the design and development of an Android application for CGNet Swara, a voice forum for citizen journalism used throughout India.

Prosthetics and Orthotics Research Laboratory, UW. Undergraduate Researcher. Advisor: Joan Sanders (September 2011 – January 2014): The research lab is focused on the development of novel technologies for individuals with lower-limb amputations. I worked on the development of software and hardware to create devices to ameliorate prosthetic socket fit. In addition, I conducted and published an independent research project analyzing changes in prosthetic sock thickness with use.

RESEARCH PUBLICATIONS

Dell N, **D'Silva K**, Borriello G. "Mobile Touch-Free Interaction for Global Health". ACM Workshop on Mobile Computing Systems and Applications (HotMobile). Santa Fe, NM. February 2015. (URL)

Cagle J, **D'Silva K**, Hafner BJ, Harrison D, Sanders JE. "Amputee socks: Sock thickness changes with normal use". Prosthetics and Orthotics International. December 2014. (URL)

D'Silva K, Marathe M, Vashistha A, Borriello G, Thies B. "A Mobile Application for Interactive Voice Forums: Design and Pilot Deployment in Rural India". (Poster) ACM DEV 2014. San Jose, CA. December 2014. (URL)

D'Silva K, Hafner BJ, Allyn KJ, Sanders JE. "Self-reported prosthetic sock use among persons with transtibial amputation". Prosthetics and Orthotics International. July 2013. (URL)

D'Silva K, Cagle J, Sanders J. "Quantifying Variations in Prosthetic Sock Thickness over Time". American Academy of Orthotists & Prosthetists Annual Meeting and Scientific Symposium. Orlando, FL. February 2013. (URL)

WORK EXPERIENCE

Google Inc. Software Engineering Intern on the Streams, Photos, and Sharing team. Mountain View, California. Advisor: Shannon Juzenas (Summer 2015): My team developed the infrastructure underpinning many of Google's Android applications. My role was to develop scrolling animations for Android applications and to build a library that made it simple for other developers to incorporate the animations into their mobile applications.

Computer Science and Engineering Department, UW. Teaching assistant for CSE 140: Introduction to Data Programming with Applications (January 2014 – March 2014): I taught a weekly section of 20 students introductory Python, a programming language. I graded homework assignments and conducted weekly office hours where I tutored students and answered questions on the course material.

Broad Institute of Harvard and MIT. Researcher on the Bioinformatics Platform. Cambridge, Massachusetts. Advisor: Josh Bittker (Summer 2012): My team worked on the development of BARD (BioAssay Research Database), a large cross-center initiative focused on creating a database to hold published data about chemicals and their biological properties. The research aimed to provide researchers with well-organized data and innovative tools to accelerate drug discovery. I worked on annotations for BARD on chemicals and their biological activities.

Interdisciplinary Honors Program, UW. Teaching assistant for HONORS 100 (September – December 2012): I taught a weekly introductory class to a group of 15 freshman students and introduced them to the Honors Program requirements and community as well as the resources and opportunities available at UW.

SELECTED MEDIA PUBLICATIONS

Undergraduate Academic Affairs. "Undergrad sees change in the palm of her hand" (May 2015): The newsletter from Dean Ed Taylor (URL) describing my research work and role as a Levinson Scholar. (URL)

Department of Bioengineering. "Student's smartphone apps connect remote populations to health care, help" (March 2015): An article summarizing my undergraduate research projects at UW. (URL)

Internet.org. "CGNet Swara Mobile Application" (November 2014): A short film describing the mobile application I developed during my internship at Microsoft Research in the summer of 2014 and its impact on the region. (URL)

National Geographic. "In Jungles of India, New Phone App Helps Indigenous Tribes Embroiled in Maoist Insurgency" (September 2014): An article describing the background and purpose of my work with Microsoft Research in India. (URL)

LANGUAGES & TECHNOLOGIES

- Proficient: Java, HTML, CSS, PHP, SQL, Python, JavaScript, Unix/Linux
- Familiar: C, C++, LabVIEW, SolidWorks, COMSOL
- Android development, Eclipse, Android Studio, Git, Junit, OpenCV, Visual Studio, SQLite
- Lab skills: Analog/digital circuitry, soldering, Instron mechanical testing, signal processing

LEADERSHIP

Association for Computing Machinery for Women (ACM-W). Vice Chair (2015 – Present): I organize academic and social events in collaboration with faculty members and industry partners with the aim of creating a supportive community for women in Computer Science at UW. I have been involved with the ACM-W chapter over the past three years at UW and officially began my position as an officer this year.

Undergraduate Research Leader, Undergraduate Research Program, UW. Outreach leader and technology director (2013 – Present): I work with other undergraduate students, many of whom are freshmen or transfer students, to teach them how to become involved in undergraduate research and encourage them to do so. I have led workshops, participated in panels, and given several talks to classrooms. My role also includes meeting one-on-one with students, some of whom I have mentored from the beginning of their undergraduate career.

UW Interdisciplinary Honors Program. Peer Mentor (2012 – Present): I mentor groups of freshmen through their first and subsequent years at the university.

High School Science Outreach Program, Bioengineering Department, UW. Outreach coordinator (2011 – Present): I organize, lead, and participate in panels, outreach activities, and mentorship programs to speak with high school students about STEM fields. I have travelled to schools in the Greater Seattle Area and shared our departmental research work. We also teach students about medical diagnostic tests and the role bioengineers play in developing them.

Curriculum Committee, Department of Bioengineering, UW. Undergraduate Representative (2014 – 2015): The committee is responsible for overseeing the educational programs of the Bioengineering department. My role was to share students' issues, suggest changes to the Department's curriculum, and evaluate proposed changes from the student point of view. Based on interviews and surveys, I created a proposal for the committee that was focused on actionable solutions to increase "engineering rigor" within the undergraduate curriculum.

UW's Biomedical Journal Club. Founder (2012 – 2014): I founded a group that invited students to discuss interdisciplinary research related to healthcare. I formed a leadership team with three other students who shared my vision for the club. As an officer, it was my role to create a friendly and open environment in which all members of the club were encouraged to share and discuss their opinions about a research publication. I led these discussions, worked to foster open dialogue each week, and collected weekly feedback from members of the group.

Taught at Hamilton International Middle School. Tutor (2011 – 2012): I worked with students in grade 7 and 8 who had difficulties with Math coursework. I explained concepts and worked with them on practice problems.

HONORS AND AWARDS

Duke of Edinburgh's Gold Award (2015): Awarded to candidates who meet the requirements and criteria for Service, Skills, Physical Recreation and Adventurous Journeys. I received the Silver award in 2011.

Mary Gates Research Scholarship (2015 & 2012): Competitive scholarships intended to enhance the educational experiences of undergraduate students at the UW while they are engaged in research guided by faculty.

Society of Women Engineers Outstanding Female Departmental Award (2015): Award given to a UW female who has conducted and published extensive research in her field, has demonstrated the initiative to delve into new technology, and has been a leader within the department.

UW Dean's List (2011 – 2015): Awarded to undergraduates who have attained a quarterly GPA of 3.50 or higher in at least 12 graded credits.

Russell/Thompson Legacy Mentoring Book Scholarship (2015): Awarded to winners of an essay-writing contest about formative mentorship experiences.

Undergraduate Research Program, Levinson Scholarship (2014): Scholarship awarded to talented and highly motivated UW juniors and seniors who want to pursue creative and advanced bioscience research.

University of Washington EIP Presidential Scholarship (2014): Intended to support students who have clearly demonstrated scholastic achievement, an interest in research, and graduate degree goals.

Undergraduate Research Program, Conference Travel Award (2012 & 2014): Awarded to UW undergraduate students to cover national conference travel expenses and registration fees to enable them to contribute to discussions of current research at professional conferences.

Emerging Leaders in Engineering Program, Priscilla and Melvin Wilson Endowed Scholarship (2014): Award designed to fund a student's participation in the Emerging Leaders in Engineering Program, which works to develop a student's leadership abilities through practical experience and personal reflection.

American Academy of Orthotists & Prosthetists Northwest Chapter, Student Researcher Award (2013): Awarded to an undergraduate or graduate student who has performed outstanding research work in Orthotists & Prosthetists.