Alexander Walczak

Education

University of California, Berkeley — Berkeley, CA
Bachelor of Arts, Computer Science — *Fall 2013 - Spring 2017*

Experience

Google LLC — New York, NY
Software Engineer, YouTube — *March 2021 - Present*
– Developing features on the YouTube Kids iOS app to give kids a fun, accessible experience and parents peace of mind.

Apple Inc. — Cupertino, CA
Software Engineer, Accessibility — *October 2018 - February 2021*
– Created the Magnifier app in iOS, which helps people with visual impairments to see the world.
– As a response to the COVID-19 pandemic, implemented People Detection, which leverages the depth sensors on iPhones to enable blind people to maintain 6 feet of social distancing.
– Made first-party apps including the Apple TV app and Home app accessible to people with visual and motor impairments.
– Delivered a talk at Apple's annual conference WWDC: *VoiceOver Efficiency with Custom Rotors.*

Adobe Inc. — San Francisco, CA
Machine Learning Software Engineer — *May 2017 - September 2018*
– Created a system of serving machine learning models to drive interactive features in Adobe Stock search.

Lawrence Berkeley National Laboratory — Berkeley, CA
Undergraduate Research Assistant — *August 2014 - May 2017*
– Performed experiments to study whether the rotation patterns of *E. coli* flagella can be used as inputs to a biosensor for chemicals around the bacteria.
– Learned fluorescent microscopy and designed and 3D printed a flow cell to observe how different substances affect flagellar rotation.
– Created a video segmentation algorithm to automate data collection and analysis of rotating bacteria anchored to a glass slide in the flow cell.

Umbo Computer Vision — Taipei, Taiwan
Machine Learning Intern — *May 2016 - August 2016*
– Developed a program for realtime few-shot learning that learned to recognize and distinguish new objects and people using a webcam.

Volunteering

Park Slope Volunteer Ambulance Corps — Brooklyn, NY
Emergency Medical Technician — *June 2022 - Present*
– I volunteer with a 911 EMS unit mainly responding to calls in medically underserved communities of Brooklyn.

Publications

T. Zajdel, **A. Walczak**, D. Sengupta, V. Tieu, & M. Maharbiz, "Towards A Biohybrid Sensing Platform Built on Impedance-based Bacterial Flagellar Motor Tachometry," *IEEE BioCAS*, Turin, Italy. October 2017.

Abstracts

T. Zajdel, **A. Walczak**, D. Sengupta, V. Tieu, C. Ajo-Franklin, & M. Maharbiz, "Impedance-Based Electrochemical Readout of Bacterial Flagellar Rotation," *Biophysical Journal*. June 2016. *Outstanding Poster Award*

Patents

Dour, Ryan et al. User interfaces for indicating distance. US Patent 11,670,144, filed August 10, 2021, and issued June 6, 2023.

Awards

Huang Scholars Program at UC Berkeley   Beijing and Taipei
                                                        Summer 2015 and 2016

– Sponsored study of third-year Chinese at the Princeton in Beijing language immersion program one summer and an internship in Taipei the next summer.

IARU-Santander Global Summer Program Scholarship   Singapore
                                                        Summer 2014

– Sponsored study of Southeast Asian culture and history at the National University of Singapore.

Hobbies

- iOS app development. Layout Studio is an app on the App Store I have been developing for three years.
- Hiking, skiing, and kayaking.