Alexander Walczak

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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 realtime few-shot learning program that learned to recognize and distinguish different objects and people.

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 Scholarship 2016-2017: sponsored study of third-year Chinese in Beijing one summer and an internship in Taipei the next summer.

Santander Bank Scholarship 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.