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.
– Brought complete accessibility to first-party apps including the Apple TV app and Home app.
– 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 Lab — Berkeley, CA
Undergraduate Researcher — *August 2014 - May 2017*

– Designed and carried out experiments to control the rotation of *E. coli* flagella to study whether the rotation patterns can be used as inputs to a biosensor of chemicals around the bacteria.
– Learned fluorescent microscopy and 3D printing to observe and run experiments in a flow cell of my design.
– Created a video segmentation algorithm to automate data collection and analysis.

Umbo Computer Vision — Taipei, Taiwan
Machine Learning Intern — *May 2016 - August 2016*

Volunteering

I volunteer as an emergency medical technician (EMT) at Park Slope Volunteer Ambulance Corps in Brooklyn.

Hobbies

- iOS app development. My 2-year project: Layout Studio   .
- Outdoor activities including hiking, skiing, and kayaking.
- Taking courses in fields from social psychology to molecular biology.

Awards

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

Publications

Dour et al. (2020). User interfaces for indicating distance. *U.S. Patent Application No. 2022/0084374(A1).* Cupertino, CA: U.S. Patent and Trademark Office.

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.

Conference 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**