tessaalexanian

robot whisperer & aspiring effective altruist

hello@tessa.fyi
github: alexanian

expertise

Now
C#
Python
Node.js
Lab automation
Used professionally & could pick up again
R
Perl
MATLAB
Fortran (sigh)
Hacking & School
Molecular biology
Arduinos & circuitry
Mathematical modeling
Non-technical
Costume-making
Spanish (B1)
Illustration

etcetera

Volunteer coordinator for Effective Altruism Global (2017, 2018)
Bay area pun-off champion (2017, 2018)
Tall ship sailor (2008-2010)

experience

since 2016 **Automation & Software Engineer** — Zymergen | Emeryville, CA
Developing software to write and execute robotic protocols that are used daily by scientists in our automated organism factory. First responder (when on call) to issues with liquid handlers, robotic arms, plate readers, and other robots.

2014, 2013 **Bioinformatics Assistant** — Princess Margaret Genomics Center | Toronto, ON
Over two internships, developed PMGC's first next-generation sequencing pipeline and examined mouse and human tissue interactions with microarray and sequence data. Benchmarked bioinformatics tools to determine best practice analysis.

2012 **Research Assistant** — VIP Lab, University of Waterloo | Waterloo, ON
Lead developer on a research project that investigated automated annotation of low-resolution racing videos. Machine learning techniques used—optical flow segmentation and random forest classifiers—are rather out of fashion.

2011 **Data Assimilation & Modelling Intern** — Canadian Ice Service | Ottawa, ON
Designed a texture analysis algorithm to classify radar images of sea ice and implemented it in Fortran. Assimilated new data into a suite of linux scripts used by meteorologists to predict future ice conditions.

education

2010–2015 **B.ASc. Systems Design Engineering** — University of Waterloo
Graduated with distinction, on Dean's Honours List. NSERC Undergraduate Research Award (2012, 2015); SFF Award for Technical Writing (2012, 2014).

extracurriculars

since 2018 **East Bay Biosecurity Group** — Facebook Page
Meetup group discussing biosecurity and pandemic preparedness. One of the founding members and the recipient of a 2018 Community-Building grant from the Center For Effective Altruism.

since 2014 **iGEM** — igem.org
Synthetic biology competition. Participated as the mathematical modeling lead of a student team, a competition judge, and a delegate to the UN BWC. Now sitting on the Human Practices and Safety & Security committees.

since 2017 **Abortion Policy API** — abortionpolicyapi.com
US abortion laws available via API. Primary software developer and project manager, coordinating a remote team with members from five different non-profits.

in school **Engineered Miscellaney** — (as engineering students do)
Including a magnetically-guided touchscreen for users with hand tremors, which was a finalist in the Velocity $1K Fund and OCE Elevator Pitch competitions and a control system for a programmable pin surface, done with local start-up PinPress.