Paul Stanish

I have a Ph.D. in chemistry and nanotechnology, I create mobile apps for fun. I am looking for a role where I can put my passions to work to make a positive difference in people's lives.

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Portfolio hsinats.github.io/
/PaulStanish
/Hsinats

EDUCATION

Ph.D. in Chemistry and Nanotechnology, University of Waterloo, Waterloo, Canada — 2020
Thesis title: Manipulation of Ga_2O_3 Nanocrystals for the Design of Functional Phosphors

B.Sc. in Chemistry and Nanotechnology, Carleton University, Ottawa, Canada — 2013

EXPERIENCE

Viziscience, Glastonbury CT — *Curriculum Designer*

September 2020 - present

I designed lectures and experiments for students AP chemistry courses across the United States to perform remotely in an effort to increase engagement and retention.

The University of Waterloo, Waterloo — *Research Assistant*

May 2013 - May 2020

I designed experiments and ran experiments, managed people and lab equipment, analyzed and visualized data, and wrote manuscripts for scientific publications.

The University of Waterloo, Waterloo — *Teaching Assistant*

September 2013 - June 2018

I supervised science and engineering students. I designed a lab experiment for the Department of Nanotechnology Engineering that has been run 4 times and was published in the *Journal of Chemical Education*.

Carleton University, Ottawa — *Teaching Assistant*

September 2009 - April 2013

I led a seminar class, supervised undergraduate labs, and presented 2 guest lectures. I was nominated as an Outstanding Teaching Assistant (2010).

Natural Resources Canada, Ottawa — *Co-op Student*

May 2011 - April 2012

I performed thermal analysis on explosives. I led a team measuring minimum burning pressure that doubled throughput. I designed a method of

SKILLS

Experiment design
Flutter/ Dart (Firebase)
Python (Numpy, Pandas, MPL, SKL)
Teaching and public speaking
Data visualization (Origin, Tableau, Matplotlib)
MS Office

AWARDS, INVITATIONS, AND SERVICE

Volunteer at Karuna Lane Sanctuary - 2018-present

Doctoral Thesis Completion Award - Winter 2020

Invited: Nerd Nite, Waterloo - May 2019

How the Light we see Affects our Lives.

Invited: Waterloo Undergraduate Nanotechnology Conference - November 2015

Single Chromophone White LEDs.

3 Minute Thesis - 2014

cleaning metal sample holders that cut cleaning time by 90%.

Environment Canada, Ottawa — *Co-op Student*

May-August 2010

I performed analysis on atmospheric samples from across Canada for VOCs.

PERSONAL PROJECTS

Car Detection for Cycling Safety — *September 2020*

I created a mobile app that detects cars, trucks, and buses and alerts users as a vehicle approaches. This is done through the use of pre-trained object detection algorithms and a custom alert algorithm. Demo

Options Trading Strategy Dashboard — *July-September 2020*

I created a mobile application that lets users create custom options trading strategies with up to 5 legs (including stocks). Users are shown payoff curves for both now and at expiry. Users can also customize the date, implied volatility, and stock price, allowing them to explore the outcomes of potential earnings events, dividends, or breaking news stories on their investments. Finally, the app breaks down the effects of time and volatility on the user's strategy and gives risk management insights. This was created in Flutter. Repo Demo Play Store

Uncertainty Calculator — *November-December 2019 & September 2020*

I created a website to perform propagation of uncertainty calculations, one of the most under-reported metrics in all of experimental science. The backend was in Django, and the front end used HTTP, CSS, and JavaScript. Upon learning Flutter I created an Android and iOS application that performs the same tasks. Website Repo Play Store

SCIENTIFIC PUBLICATIONS

I have authored or co-authored 9 scientific publications and proceedings.

News release.

Outstanding Teaching Assistant - Carleton University - 2010

Donald R. Wiles Scholarship - 2009

LANGUAGES

English (native), French (working proficiency)

REFERENCES

Available upon request