Eric Yang

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Education

Harvard Medical School, Boston, MA (August 2020 – present)

- ·Master's in Biomedical Informatics | Expected Graduation Date: December 2021
- ·Relevant Coursework: Deep Learning, Computational Statistics, Biological Data Analysis, Computing for Biomedical Informatics
- ·Selected Projects: NEISS RShiny Visualization, ML on RNA-Seq Data (see ericyang789.github.io for full list and descriptions)

University of Washington, Seattle, WA (September 2016 – June 2020)

- ·B.S. in Bioengineering **|** Minor in Applied Mathematics **|** *Cum Laude* **|** 11x Dean's List Award
- ·Departmental Honors: Development of Python Course for Bio-Science Applications (Neural networks, Genomics, Protein design)
- ·Relevant Coursework: Machine Learning, Data Structures and Algorithms, Genome Informatics, Scientific Computing
- ·Selected Projects: Breast Cancer Classifier, HuskyMaps, Anophelseize, Computational β-Glucanase Design, Analog ODE Solver

Highlighted Skills

Programming and Software

·Python (NumPy, SciPy, Matplotlib, Pandas, Scikit-Learn, Keras, TensorFlow) ·R (Tidyverse, RShiny) ·Java ·SQL ·Tableau
·Git ·MATLAB ·Octave ·HTML ·CSS ·Inventor ·COMSOL ·FIJI/ImageJ ·LabView ·LaTeX ·MS Office Suite

Data Science

·Regression (Multilinear, Logistic, Polynomial, Random Forest) ·Classification (K-NN, SVM, Naïve Bayes) ·Deep Learning
·Clustering (K-Means, Hierarchical) ·Decomposition (NMF, PCA) ·Expectation Maximization ·Statistical Testing ·Databases

Professional Experience

Undergraduate Researcher, Professor Cole DeForest Research Group (March 2017 – June 2020)

- ·Developed 3D arteriole-capillary-venule unit with unprecedented resolution (10 μm) to study malaria-infected red blood cells
- ·Scripted custom image and statistical analysis software in MATLAB to process large time series blood flow datasets
- ·Co-authored 1 peer-reviewed manuscript in *Science Advances*, presented work in 2 professional research symposiums

Undergraduate Teaching Assistant, U. of Washington Department of Bioengineering (September 2019 - December 2019)

- ·Served as a teaching assistant for 70+ undergraduates in BIOEN 326: Solid and Gel Mechanics taught by Prof. Wendy Thomas
- ·Conducted weekly discussion sections, held review sessions/office hours, received high teaching evaluation by students (4.7/5.0)

Research Associate Intern, Illumina, Inc. (June 2019 - September 2019)

- ·Designed and implemented novel surface-based DNA assays to enable multi-sample continuous genomic sequencing
- ·Analyzed next generation sequencing data using in-house software and provided bioinformatics support with algorithm designs
- ·Presented research results to senior scientists, managers and directors to support patent applications and product development

Engineering Design Coach, University of Washington College of Engineering (September 2018 - March 2019)

- · Instructed weekly sections in Java and Arduino scripting for 50+ undergraduates in Introduction to Engineering Design course

Summer Innovation Scholar, CoMotion at the UW and Mary Gates Endowment (June 2018 - August 2018)

- ·Developed novel drug delivery nanogel biomaterial intended to release chemotherapeutics in the body with limited side effects
- ·Awarded 2 University research funding/scholarships, presented at research conference to University faculty and industry leaders

Honors and Awards

Tau Beta Pi Engineering Honors Society (top 20% of senior class in UW College of Engineering) (May 2020)
Husky 100 (selected as one of UW's 100 most driven and impactful students) (March 2020)
Husky Empowerment Award (recognized by UW for tackling challenging global health needs) (April 2019)
2x Buerk Center for Entrepreneurship Prototype Funding Award (UW research funding) (January 2018 and 2019)
Levinson Emerging Scholar Award (highly prestigious UW scholarship for bioscience research) (September 2018)
Engineering Design Coach Scholarship (exceptional TA mentoring UW engineering students) (September 2018)
CoMotion Mary Gates Innovation Scholarship (UW funding for work in in faculty-led startups) (June 2018)
Hollomon Health Innovation Challenge Finalist (finalist out of 39 at UW health competition) (March 2018)
Purple and Gold Scholarship (four-year UW undergraduate scholarship) (September 2016)

Publications

Arakawa, C., Gunnarson, C., Howard, C., Bernabeu, C., Phong, K., **Yang, E.**, DeForest, C. A., Smith, J.D., Zheng, Y., Biophysical and Biomolecular Interactions of Malaria-Infected Erythrocytes in Engineered Human Capillaries. *Science Advances*. ***6****, eaay7243 (2020).*