Eric Yang

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Education

Harvard Medical School, Boston, MA (August 2020 – present)
·Master's in Biomedical Informatics | GPA: 4.0/4.0 | Expected Graduation Date: December 2021

University of Washington, Seattle, WA (September 2016 – June 2020)
·B.S. in Bioengineering | Minor in Applied Mathematics | *Cum Laude* | Departmental Honors | 11x Dean's List Award

Highlighted Skills

Programming and Software
·Python (NumPy, SciPy, Matplotlib, Pandas, Scikit-Learn, Keras, PyTorch) ·R (Tidyverse, RShiny, Plotly) ·Java ·MATLAB
·HTML ·CSS ·SQL ·Tableau ·Git ·Bash ·HPC/Big Data (MPI, OpenACC, OpenMP, Hadoop, Spark, Dask) ·AWS

Data Science
·Regression ·Classification (K-NN, SVM, Naïve Bayes, Random Forest, XGBoost) ·Deep Learning ·Clustering (K-Means, Hierarchical) ·Dim. Reduction (NMF, PCA, t-SNE) ·NLP (TF-IDF, BERT) ·Causal Inference ·Interpretable ML ·Databases

Professional Experience

Graduate Researcher, Massachusetts General Hospital (January 2021 – present)
·Automating radiology report classification workflow with traditional, transformer-based, and novel NLP algorithms
·Invited to present work at RSNA research conference; first-author publication currently in preparation

AI/Data Science Intern, Genentech, Inc. (May 2021 – August 2021)
·Applied machine and deep learning algorithms to quantify drug exposure-patient response relationship with clinical trials data
·Constructed custom causal inference, interpretable ML, and visualization packages with Python, R, and big compute tools
·Presented novel findings to senior leadership to guide future clinical trials decision making (dosage selection, patient recruitment)

Undergraduate Researcher, Professor Cole DeForest Research Group (March 2017 – June 2020)
·Developed the smallest 3D artificial capillary to date (10 μm) with novel tissue engineering methods and mathematical modeling
·Scripted custom image and statistical analysis software in Python and MATLAB to process large time series blood flow datasets
·Co-authored one manuscript in *Science Advances* and presented work at two professional research symposiums

Undergraduate Teaching Assistant, U. of Washington Department of Bioengineering (September 2019 - December 2019)
·Served as a TA for 70+ undergraduates in Biomechanics course and received high teaching evaluation given 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 NGS data with in-house software and provided bioinformatics support by scripting image processing algorithms
·Presented results to senior leadership and advanced successful research for further product development and patent licensing

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 two university research scholarships and presented work at conference to UW 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 (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 faculty-led startups) (June 2018)
Hollomon Health Innovation Challenge Finalist (finalist out of 39 at UW health competition) (March 2018)

Publications

Arakawa, C., Gunnarson, C., Howard, C., Bernabeu, C., Phong, K., **Yang, E.**, et al., Biophysical and Biomolecular Interactions of Malaria-Infected Erythrocytes in Engineered Human Capillaries. *Science Advances*. **6**, eaay7243 (2020).