

ROHAN AHLUWALIA

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EDUCATION

Yale University, B.S./M.S. in Computer Science | New Haven, CT

May 2024

GPA: 3.84/4.0, Coursework includes: Data Structure and Programming Techniques (Cs 223), Computer Architecture and Systems Programming (Cs 323), Discrete Mathematics (Math 244), Linear Algebra (Math 225), Artificial Intelligence (Cs 470), Probability (Stat 241), Object-Oriented Programming (Cs 327), Computer Vision (Cs 475)

Westview High School | Portland, OR

June 2020

Class of 2020, SAT: 1570/1600, GPA: 4.47/4.0, Activities: Baseball, President of Science Fair Club, Founder of HOSA, MUN

TECHNICAL SKILLS

Programming Languages

C++, C, Python, R, Java, MATLAB, Bash, x86 Assembly

Tools

Mathematica, AWS, MATLAB, Vim, Emacs, L^AT_EX, Git, Microsoft Office

EXPERIENCE

TSAI City Summer Fellowship

New Haven, CT

Student Founder

May 2021 — Aug 2021

- PF Glucose selected as one of 15 startups to receive \$15,000 in grant funding along with mentorship, and venture capital connections from Yale and TSAI City
- Presented in Demo Day in August 2021 to angel investors, engineers, and venture capitalists

PF Glucose

New Haven, CT

Founder/CEO

Oct 2018 — Present

- Created and developed patent-pending technology to noninvasively detect glucose for individuals with diabetes
- Prototype's initial accuracy is consistent with other glucose monitors on the market (pfglucose.org)

Yale University School of Engineering and Applied Sciences

New Haven, CT

Undergraduate Researcher, Dept. of Biomedical Informatics and Computer Science

Sept 2020 — Present

- Paper "Bayesian Structural Time Series for Biomedical Sensor Data: A Flexible Modeling Framework for Evaluating Interventions" accepted into PLOS Computational Biology (<https://doi.org/10.1371/journal.pcbi.1009303>)
- Constructed deep learning algorithms for sequential wearable sensor data to determine indicators of brain/mental illnesses (ADHD, Schizophrenia, Depression) in adolescents

City of Hope Hospital

Arcadia, CA

Data Science and Machine Learning Intern, Dept. of Computational Medicine

Jun 2019 — Sept 2019

- Developed Bayesian framework for understanding interactions between personalized drugs and glioblastoma cancer genes over time

Oregon Health and Science University

Portland, OR

Machine Learning Researcher, Dept. of Biomedical Engineering

Jun 2017 — Jun 2019

- Created a differential equation-based algorithm for postprandial meal modeling to improve the model predictive control algorithm for artificial pancreas systems

ACTIVITIES

Token Nonprofit

Portland, OR

President of 501 © 3 Nonprofit Organization

Jan 2018 — Present

- Founded Token to help underprivileged children with chronic conditions in developing countries receive medical supplies
- Raised funding for more than 10 children via 5K Charity Runs, Events, and Auctions

HONORS

- **Regeneron Science Talent Search**, named Top 300 Scholar in the most prestigious science research competition for high school seniors for my noninvasive glucose monitor (Jan 2020)
- **Intel/Regeneron International Science Fair**, Second Place Grand Award in Biomedical Engineering in May 2019. Second Place in AVASA Foundation, 2019. Third Place in SPIE, 2019. Finalist in Biomedical Engineering in May 2018.

PUBLICATIONS

[1] Liu J, Spakowicz DJ, Ash GI, Hoyd R, Ahluwalia R, et al. (2021) Bayesian structural time series for biomedical sensor data: A flexible modeling framework for evaluating interventions. PLOS Computational Biology 17(8): e1009303

[2] Ahluwalia, R. (2019) A Real-Time Detection System using Advanced Image Techniques to Diagnose Lipohypertrophy in People with Insulin Dependent Diabetes. JOURNYS, Journal for Youth in Science (Issue 10.2)