Sébastien Beurnier

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EDUCATION

University of California, Berkeley — Expected graduation: May 2024

Double Major in Molecular/Cellular Biology & Computer Science (3.9 GPA)

Extracurriculars: Phoenix Consulting, iGEM

Relevant Coursework: ML and Statistical Models for Molecular Problems in Bioengineering (BioE 290, Grad Class), Structure and Interpretation of Programs, Multivariable Calculus, Linear Algebra, Data Structures, Biotechnology, General Genetics, Engineering Molecules, Organic Chemistry I&II

Columbia University Science Honors Program, NY — September 2018 - June 2021

Selected to take college-level courses in this highly-selective program at Columbia University

Coursework: Bioinformatics, Quantum Mechanics & Relativity, Algebraic Combinatorics & Symmetric Functions, Lab Techniques

Stuyvesant High School, NY — September 2017 - June 2021

97.8/100 GPA — Ranked above 95th percentile in one of the most prestigious & competitive high schools in America

Main Extracurriculars: Science Bowl Captain, Science Olympiad Chemistry Captain, Competitive Coding Club Vice-President, Bio Club Founder

Awards: USABO Top 50, Genes in Space Semifinalist, AIME 3x Qualifier, Scioly States 2nd, 2x Nationals Science Bowl Qualifier (ranked top 16 once)

PROJECTS

Sohn Lab, UC San Francisco - Researcher — January 2022 - Present

- Investigating the use of ResNets and NLP frameworks for the clinical improvement of lung cancer diagnosis using CT scan algorithms
- Created an accurate 2D ResNet model to classify DICOM mammogram images of tumors as malignant or benign using patient information

Conboy Lab, UC Berkeley - Researcher — December 2021 - Present

- Investigating the therapeutic uses of Crispr Cas-9 and heterochronic blood exchange to reverse aging in mice for future application in humans

Rafailovich Lab, Stony Brook University - Researcher — July 2020 - March 2021

- Published in Materials Research Society (MRS) journal and presented research as a 10-minute presentation at MRS conference on investigating the use of the fiber formation-inhibiting oligopeptide P12 as a possible treatment against COVID-19 initiated thrombogenesis
- Utilized Molecular Modeling Software like AutoDock to simulate and determine mechanism of action for the inhibition of fiber formation
- Treated H1N1-infected MDCK-2 cells with 50μmol P12 and found fiber formation to decrease by over 2 logs using AFM and ImageJ analysis

SomMeLier - ML Engineer — August 2021

- Explored metaheuristic algorithms such as Monte Carlo Simulated Annealing to optimize K-means unsupervised clustering of wines into cultivar provenance with 97% accuracy using chemical constituent information
- Implemented other unsupervised learning methods such as DBSCAN and Ward-linkage agglomerative clustering with similar accuracies

SneakScraper — September 20219 - November 2019

- Profited over $3500 using Twitter API to perform sentiment analysis on latest Nike sneakers being released before algorithmically determining the optimal resell price for the most popular ones on websites like StockX using web scraping with Beautiful Soup

EXPERIENCE

Pfizer, CA - Consultant through Phoenix Consulting — September 2021 - January 2022

- Assisting Pfizer's External Marketing Team in expanding its oncology line in key emerging markets (Brazil, Argentina, India and Saudi Arabia)
- Conducted secondary research and 30+ interviews to gauge Pfizer's competitors and identify pain points for HCPs in Saudi Arabia and India
- Ideated 11 novel promotional strategies to counter pain points and presented them along with competitive landscape to Ext. Marketing Team

Helping Hands Community, NY - Software Engineer — April 2020 - September 2020

- Oversaw and helped develop a tech nonprofit that streamlines how food banks and social service organizations safely deliver essential groceries to families in need via volunteers and ride-share drivers during and after the Covid-19 pandemic
- Implemented recursive-DBSCAN and geohashing to optimize the vehicle routing algorithm and reduce runtime by 18%

Berkeley Phoenix Consulting, CA - Senior Analyst — August 2021 - Present

- Providing consultation to healthcare & biotechnology clients ranging from nonprofits and startups to VC firms and big pharma
- Currently advising oversubscribed series A company on branding and positioning for its penetration in the organ transplantation industry
- Improved UI/UX design of their prototype companion app after conducting interviews with transplant surgeons and software developers

SKILLS

Dry: Python (TensorFlow, PyTorch, Pandas), JavaScript (React), HTML/CSS, Microsoft Suite, Jmol, BioConductor, AutoDock, RasMol, BLAST, etc.

Wet: spincasting, replica plating, plaque assay, ELISA, RT-qPCR, flow cytometry, chromatography, electrophoresis, transformation, transfection, etc.

Interests: Soccer, Baking, Fashion, Sneakers, Traveling, Reading Dystopias, 80's Rock Music & Old-School Rap, Sci-fi Movies & Sitcoms, Marvel, etc.