

Vikram Hegde

vikramhegde@gmail.com • 720.431.6227 • linkedin.com/in/vikramhegde2

EDUCATION



Northeastern University

Bachelors, Masters: Bioengineering, Minors: Music and Math

May 2022

GPA 3.700

Awards: Honors Half-Tuition Academic Merit Scholarship, Deans' List (4x), National Merit Finalist

Relevant Courses: Biochemical Engineering, Molecular Bioengineering, Cellular Engineering, Intro to Computer Science, Data Structures and Algorithms, Economics, Statistics, Dynamical Systems, Engineering Statistics

Relevant Extracurriculars: Member: BMES (Bioengineering Society); Editor, [Author: Ortelian Society Publication](#)

PROFESSIONAL EXPERIENCE

SQZ Biotech, Engineering Co-op

Jun 2021 – Aug 2021

- Contributed to the design of an automated decentralized manufacturing platform for cell therapy drug products
- Planned, wrote, and executed over 5 experiments to optimize unit operations for a new cell manufacturing process
- Performed experimentation and data analysis to characterize drug product generated by the manufacturing process
- Designed and tested proof-of-principle instrumentation and experimentation for PBMC isolation from leukopacks
- Interfaced with multiple vendors to ensure inventory availability and delivery timelines conformed to expectations

Voyager Therapeutics Novel Viral Capsid Engineer

Jul 2020 – Dec 2020

- Improved capsid insertion plasmid selection through the development of a machine learning NGS ingest platform
- Augmented approaches to directed evolution by leveraging existing data pipelining to run dynamic analytics scripts
- Democratized platform access through deployment of the service to AWS and integration with company wide SSO
- Reduced the operational inefficiencies around Qiagen DNA purification kits through self-created physical scaffolding
- Learned and executed lab techniques: HEK Protein Expression, E. coli DNA amplification, Ultra-centrifugation, Counts
- Executed viral purification and lab scale production using cloning, restriction enzymes, electrophoresis, centrifuges

Sanofi-Genzyme Formulation and Lab Automation Engineer Co-op

Jun 2019 – Dec 2019

- Reduced analysis time of DMA and SEC data by 95% through automated scripts replacing human-hand analysis
- Reduced vial and drug product wastage by 50% through intensive vial modelling on self-architected python scripting
- Learned and executed lab techniques and instrumentation: HPLC, SEC, DMA, DSC, NanoDrop, FPLC, Lyo, Pipetting
- Executed formulation studies for three large protein and monoclonal antibody drugs below budget and on schedule

Charter Communications Principal Technologist I (Front End Developer)

Jun 2018 – Sep 2018

- Enhanced tracking for valuable video assets and asset ingestion microdata through the development of a mobile app
 - Made video workflow tracking platform more accessible to upper management through existing API integrations
 - Proved viability of mobile platform for asset tracking through adoption rate against traditional webapp platform
 - Saved tens of developer hours through improved daily lunch restaurant selection using full-stack internal application
-

SKILLS & INTERESTS

Software: *Python, Matlab, AWS S3/EC2, ML in practice, Complex Architecture, RESTful Services, Java, Git, Flutter*

Bio-Engineering: *Fitness Landscapes by Fitness Assay, ML/AI Directed Evolution, High Throughput Production*

Engineering: *Arduino, Figure Creation, Automation, Data Analysis, 3D Printing, Milling, Modelling, Paraview*

Biological: *Recombinant DNA, mAb/AAV Production, E. coli Culturing, T-Cells, DSC, HPLC, Chemical Assay, ELISAs*

Musical: *Piano, Musical Production, Singing, Recording, Music Engineering, Sound Design, Synthesizers, Logic X*

Interests: [Entrepreneurship](#), [Cultural Cuisines](#), Ping Pong, Philosophy, Travel, Mathematics, Hiking, Efficiency