

Vikram Hegde

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PROFESSIONAL EXPERIENCE

mRNA Site Lead Engineer @ Sanofi

Jun 2022 – Current

- 75% lower sample-to-data cost for three pre-clinical assays, tracking health with SQL, AWS S3, Lambda, and PowerBI.
- Architected and built 10 automation platforms for five mRNA teams using HSL, Biosero, Spring, and DLL integrations.
- Created a JIRA based SCRUM program to score point-wise tech ticketing to assign to an onsite team of five engineers.
- Implemented reagent ordering system, leading to a 50% reduction in experiment prep time in 30+ mRNA workflows.
- Cut sample-to-data compute by 85% on three pre-clinical assays via Java run transform services using MongoDB, EC2.
- Designed versioned Hibernate/Flyway run-tracking schema keeping every analysis procedure's outputs reproducible.
- Built usage and error tracking for 10 robotic systems, ingesting logs and error states via Spring Boot REST APIs.
- Built a JIRA SCRUM program scoring technical tickets for five engineers tracked on Jira and Confluence docs reviews.
- Built a Spring Boot reagent-ordering app on AWS CDK (S3, EC2, Maven), cutting 50% prep time for 30+ workflows.

ML Engineer Intern @ Voyager TX

Jun 2021 – Dec 2021

- Implemented model for in silico genetic optimizer to model success for genetic variation using scikit-learn on python.
- Built tensor model for directed evolution leveraging SQL virus data to run genetic variation modelling using T4 g-card.
- Democratized platform access through deployment of the model to local IP and integration with company wide SSO.
- 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.

Data Scientist Intern @ Sanofi

Jun 2020 – Dec 2020

- 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 model

Software Engineer @ Charter Communications

Jun 2018 – May 2020

- 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 SpringBoot API Integrations.
- Proved viability of Swift mobile platform for asset tracking using adoption rate against traditional web-app platform.
- Deployed application using App Store connect to enable upper management private access to the tracking platform.

EDUCATION

 **Northeastern University** MS/BS in Cell and Tissue Engineering, *Minors* in Music, Math **May 2022**

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

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

SKILLS & INTERESTS

Languages: Python, Javascript, Flutter, React Native, Vue, React, SQL, Swift, Java, Git, Ruby, Matlab, R, Excel

Hosting: AWS S3/EC2/CDK, Google Cloud, Firebase, Vercel, Mongo Atlas, CloudFlare, Stripe, App Store Connect

Engineering: Arduino, Laser Cutting, Automation, Data Analysis, 3D Printing, Modelling, Paraview, AutoCAD

Platforms: Recombinant DNA, mAb/AAV Production, E.coli DNA Amplification, mRNA, Lipid Nanoparticles, CAR T

Characterizations: DSC, Nanodrop, HPLC, SEC, Chemical Assay, ELISAs, Ribogreen, Flow Cytometry, M5, Lunatic

Interests: [OS Projects](#), [Coding by hand](#), [Cuisine Access](#), Politics and Philosophy, Mathematics, Soccer, [Efficiency](#),

[Poker](#), [Systems Reasoning](#), Epistemology, First Principles Reasoning, [Video Generation](#), [Compounding](#), Stocks and

[Options](#), [Matchmaking Dynamics](#), [Music Production and Vocal Performance](#), [Counter Strike](#), [Fortnite](#), Good Films