

# RONIL SYNGHAL

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📍 Concord, CA | Philadelphia, PA

Versatile and practical engineer with experience at a large-scale healthcare company and an early-stage startup. Passionate about designing and creating meaningful products that provide a great experience to users.



## EDUCATION

### University of Pennsylvania

- **MSE in Robotics** Jan 2021 - Dec 2022
- **BSE in Bioengineering** Aug 2018 - May 2022

Relevant Coursework: Brain Computer Interface, Intro to Machine Learning, Product Design, Biological Data Science, Rehab Engineering & Design

Activities: **Engineering Deans' Advisory Board,**  
**MSSP 607 (Practical Programming for Data Science) TA,**  
**Penn Masti (Bollywood/Fusion Dance Team),**  
**Penn Data Science Group, Varsity Tutors**



## SKILLS

- **Languages**  
Python, SQL, HTML/CSS, MATLAB, Javascript, R, C++, Swift, Flutter
- **Frameworks**  
Pandas, NumPy, Flask, Plotly Dash, React, TensorFlow
- **Tools**  
InVision, Figma, Git, SolidWorks, Microsoft Office, Arduino, Onshape, Docker, Protopie, Raspberry Pi
- **Technical**  
Rapid Prototyping, Product Design, Interaction Design, Research, RESTful Architecture, Database Development



## EXPERIENCE

### Full Stack Engineer

Stealth Startup | May 2021 - Present

- **Lead full-stack development & UI/UX** for various projects for upcoming healthcare software design & consulting firm
- Designed **end-to-end application** for **data-driven** psychological assessment of employee motivation using SQLite for databases, Python frameworks for API Design & NLP, & Plotly Dash/CSS for user experience
- Developed early warning system for nephrology practice **leveraging ML techniques** against 7 components of medical history to **automate risk-stratification for 3000 patients** to reduce hospitalizations

### Machine Learning Research Intern

Radhakrishnan Lab | Jan 2021 - Present

- Built trajectory models of the EGFR Kinase Domain using VMD and GROMACS to **identify relevant structures** of the 14 most prevalent cancerous mutations
- Identified patterns across the 14 mutations to **build a neural network** in Python to predict the clinical consequences of any given mutation with the final goal of developing personalized cancer treatments

### Engineering and Business Analyst Intern

Kaiser Permanente | Jun 2019 - Dec 2019

- **Prototyped remote tracking** of all hospital assets & 100+ employees using RF-enabled ID badges, & created a heat map in JavaScript to track the IOT devices
- **Designed & developed the user experience** for the patient-facing nutrition tracking app using Flutter



## SELECT PROJECTS

### CliniCall

Children's Hospital of Philadelphia | Sep 2021 - Present

- Developed a wearable device & application allowing physicians in hospital to capture real-time patient conditions & communicate via video/audio with on-call attendings at home, replacing streams of video calls & photos over text

### Anime Recommendation Application

Personal | July 2021 - August 2021

- Prototyped the user interface in Figma & developed a content-based filtering recommendation system in Python to generate most similar animes to ones users already liked

### Bluetooth Enabled ECG Device for Astronauts

Bioengineering Modeling, Analysis & Design | Feb 2021 - Apr 2021

- Designed an electronic circuit for Bluetooth-enabled portable cardiac monitoring after filtering ECG data & developing algorithms for waveform analysis & biomarker detection of respiratory/heart rates