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, RaspberryPi, Arduino, Onshape, Docker, Protopie
- **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

- Used VMD and GROMACS to build trajectory models of the EGFR Kinase Domain to **identify relevant structures** of the 14 most prevalent cancerous mutations
- Identified patterns across the 14 mutations to **build a neural network** in Python that can predict the clinical conseuqences 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