RONIL SYNGHAL

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📍 Concord, CA | Philadelphia, PA

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

EDUCATION

University of Pennsylvania

- **MSE in Robotics** | *GPA: (3.97/4.00)*   **Jan 2021 - Dec 2022**
- **BSE in Bioengineering** | *GPA: (3.70/4.00)*   **Aug 2018 - May 2022**

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

Activities: **Engineering Deans' Advisory Board, Penn Masti (Bollywood/Fusion Dance Team), Varsity Tutors**

SKILLS

- **Proficient**
  Python (Dash, Pandas, NumPy, Flask), SQL, HTML/CSS, MATLAB, R, SolidWorks, InVision
- **Intermediate**
  Javascript, React.js, Onshape, Git, C, Figma, InVision
- **Intermediate**
  Flutter, Python (TensorFlow), Swift, Protopie

EXPERIENCE

Full Stack Engineer

Early Stage 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

- Worked under Dr. Ravi Radhakrishnan to build **quantitative models of signaling networks** relevant to profiling & **predictive modeling of clinical cancer mutations** in many transformed cell lines
- Used biophysical/biochemical research to understand activation of kinase mutations in the EGFR domain to **improve parameters for a neural net tool** which predicts mutation effects & allows **personalized cancer treatment**

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

Employee Motivation Assessment

- Developed the NLP algorithm for a web application that automates the scoring for the Thematic Apperception Test & designed the UI using Plotly Dash/CSS for Dr. Brad Spencer

Bluetooth Enabled ECG Device for Astronauts

- 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

Fall Detection System for Children's Hospital of Philadelphia

- Surveyed 50+ staff/patients & analyzed real-time data on patient falls to diagram common fall locations, redesign non-slip socks, & prototype a fall detection device using Solidworks & Arduino