RONIL SYNGHAL

synghalronil@gmail.com
www.ronilsynghal.com
Concord, CA | Philadelphia, PA

Full stack 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*** | *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,**
MSSP 607 *(Practical Programming for Data Science)* TA,
Penn Masti (Bollywood/Fusion Dance Team),
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
- **Technical**
  Rapid Prototyping, Product Design, Interaction Design, Research, RESTful Architecture, Database Development

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

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

Fall Detection System

Children's Hospital of Philadelphia | Sep 2019 - Dec 2019

- Surveyed 50+ staff/patients & analyzed real hospital data on patient falls to diagram common fall locations, redesigned non-slip socks, & prototyped a fall detection device using SolidWorks & Arduino