Chinmay Mokashi

Houston, TX

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Education

University of Texas Health Science Center at Houston (UTHealth) *Houston, TX*
Master of Science in Biomedical Informatics *January 2021 to May 2023*

- Graduate Researcher
- Teaching Assistant for Machine Learning class
- **Courses:** Medical Imaging and Signal Pattern Recognition, Big Data, Machine Learning, Statistics in Biomedical Informatics

National Institute of Technology, Rourkela *Rourkela, India*
Bachelor of Technology in Biomedical Engineering *August 2012 to May 2017*

- Specialized in digital health and embedded systems

Work Experience

iOPEX Technologies *Bengaluru, India*
Senior Software Engineer - Data Engineering *May 2019 to December 2020*

- **Led a team of 3 in data engineering design**, primarily based on Google Cloud Platform
- Implemented ETL pipelines to **clean, structure and train health emails** to create custom categories
- Categorized **healthcare emails into 10 non-exclusive labels** (**best AUC - 0.84**)
- Worked on time-sensitive ad-hoc data analysis projects, such as **health insurance and time series clinical data** using MySQL and Oracle SQL

AthenasOwl, Quantiphi Inc. *Mumbai, India*
Data Engineer *January 2018 to January 2019*

- Ideated and instituted the data infrastructure and architecture of the digital health AthenasOwl ML platform
- Architected a **Gateway API for authorization, authentication and user management** of a multi-tenant platform-as-a-service (PaaS) infrastructure for clinical work, using Docker and Kubernetes
- **Collaborated with UI/UX vendors** to create PaaS platform interfaces

University Projects

Developed an automated 3D image segmentation AI tool to screen for endometriosis *Houston, TX*
Medical AI Researcher *August 2022 to December 2022*

- Researched and implemented U-Net (Convolutional Neural Nets) based nnU-Net pipelines on annotated 3D MRI sequences for semantic image segmentation (**Average Dice score - 0.88**). Collaborated with healthcare professionals to review, annotate/segment and clean MRI data

Built a visualization tool to identify misinformation on YouTube regarding vaping *Houston, TX*
Medical AI Researcher *May 2021 to August 2021*

- Identified **misinformation with 80% accuracy using supervized and unsupervized (topic modeling)** ML techniques on self-generated and labeled dataset of Youtube video metadata

Deployed a purely client-side web-application to predict the risk of acute stroke in patients using OCTA images *Houston, TX*
Medical AI Researcher *January 2022 to May 2022*

- Programmed a 1-page web-application with image processing and vascular metric calculation capabilities on React.JS
- Trained a ML classifier on OCTA images and deployed on the user interface (**AUC - 0.81**)

Created an X-ray image classifier to predict cardiomegaly *Houston, TX*
Medical AI Researcher *December 2022*

- Using image processing and transfer learning, conceptualized **10 different data pipelines** with different approaches and compared them to identify the best approach. Wrote a paper to report the results

Skills

Data Analysis and Machine Learning	SQL, Matplotlib, Pytorch, scikitlearn, scikit-image, BERT, Tableau
Data Engineering	Google Cloud, MySQL, REST API, Linux, MongoDB, PySpark, NLTK
Software Engineering	Python, Node, React, Flask, Ansible, BeautifulSoup
Biomedical Data	DICOM, Epic EHR, HL7, FHIR, RxNORM