SARTHAK SUNIL DHANKE

773.487.2474 | sarthakdhanke@uchicago.edu | LinkedIn | GitHub

SUMMARY

Applied data scientist with experience building interpretable models, streamlining analytics pipelines, and solving real-world problems in healthcare, infrastructure, and systems design.

EDUCATION

The University of Chicago – M.S. in Applied Data Science *Expected Dec 2025 | GPA: 4.0*
Coursework: Advanced Computer Vision, Machine Learning, Bayesian ML with GenAI

IIT (BHU) Varanasi – B.Tech in Electronics Engineering *Jul 2017 – May 2021 | GPA: 3.7*
Publication: "Index Modulation Multiple Access via Deep Learning Detection," IEEE 5GWF 2020

EXPERIENCE

Research Assistant | *UChicago, MACS - 40700* *Apr 2025 – Present*

- Developed a curated dataset collection balancing complexity, clarity, and relevance to help social science students build professional data storytelling skills

Web Developer | *BREATHE Lab, UChicago Medicine* *Jan 2025 – Mar 2025*

- Built constrained-use research websites for a tobacco intervention study, where neutrality and accessibility were critical to avoid biasing participant behavior and support informed choices by youth
- Led collaboration with researchers and clinicians to translate study requirements into a user-centered website that aligned with ethical constraints and avoided biasing youth participants

Design Verification Engineer | *Texas Instruments* *Jun 2021 – Jun 2023*

- Designed reusable components to scale testing, reducing time-to-market by 3 months using Python
- Developed models for optimizing voltage reference parameters, using NumPy, SciPy, and Scikit-learn, cutting testing time by 2 weeks
- Automated processing circuit simulation data, reducing processing time from 1 day to 30 minutes
- Engineered an automated testing suite, reducing testing time from 2 weeks to 1 hour using Excel VBA, Python, and Pandas

PROJECTS

Video Classification using Deep Learning

- Achieved 90% accuracy on UCF-101 dataset using CNN-LSTM architecture, optimizing across accuracy, model size, and training time through systematic comparison of 4 different architectures

Hospital Readmission Risk Prediction

- Developed a calibrated predictive model using multi-hospital clinical data to improve risk stratification and targeted intervention decisions, demonstrating potential $200K annual savings

Chicago Road Accident Risk Classification

- Built classification model with 30% accuracy improvement over baseline, showing potential $5.25M annual savings from targeted accident reduction allocation

SKILLS

- **Languages & Tools:** Python, R, SQL, HTML/CSS, JavaScript, Tableau, Git, Linux, Streamlit
- **Libraries:** Scikit-learn, PyTorch, TensorFlow, XGBoost, Matplotlib, Seaborn
- **Data Engineering:** Airflow, Docker, Spark, GCP