

# Baiying Lu

☎ +1 410-934-8293 | ✉ baiying.lu.gr@dartmouth.edu | 🔗 LinkedIn | 📁 Portfolio | 📍 Hanover, NH, USA

## OVERVIEW

I am actively seeking a 2025 summer **internship** that will leverage my expertise in **applied machine learning, time-series analysis**, and **digital health** to facilitate data-driven decision support in cutting-edge technology and projects.

## EDUCATION

<b>Dartmouth College</b> <i>Ph.D. in Computer Science</i>	Hanover, NH 2021 – Present
<b>Duke University</b> <i>M.S. in Biomedical Engineering; GPA: 3.97/4.00</i>	Durham, NC 2019 – 2021
<b>Shandong University</b> <i>B.E. in Biomedical Engineering; GPA: 91.13/100</i>	Shandong, China 2015 – 2019

## EXPERIENCE

<b>Novo Nordisk 2024 Summer Internship</b> <i>Data Scientist Intern, AI Analytics, Digital Data Science Department</i>	Boston, USA June 2024 – August 2024
<ul style="list-style-type: none"><li>Conducted advanced data exploration and analysis on clinical trial datasets from medical devices and wearables.</li><li>Applied statistical methods to uncover correlation and insights to assist patients with their glucose management.</li></ul>	
<b>Enabling Data-driven Management of Diabetes with Mobile Technology</b> <i>Student Research Scientist, Augmented Health Lab</i>	Dartmouth College Nov 2021 – Present
<ul style="list-style-type: none"><li>Led a project on modeling and predicting mealtimes from wearable insulin pump data using deep learning and traditional machine learning methods such as LSTM and ARIMA for time series forecasting.</li><li>Designed and developed the front- and back-end components of a health monitoring mobile application in Kotlin, Flutter, and Go. This monitoring platform integrates continuous data from medical- and customer-grade wearable devices to inform personalized management of diabetes.</li><li>Contributed to the full data pipeline on related research studies, including study design, data collection, preprocessing, data analysis, and interpretation.</li></ul>	
<b>Digital Biomarker Discovery Pipeline - Data Compression Toolbox</b> <i>Research Assistant, Big Ideas Lab</i>	Duke University May 2020 – June 2021
<ul style="list-style-type: none"><li>Created a data transformation pipeline with five effective methods, including wavelet transform and autoencoder, for 5 types of digital biomarkers collected by wearables. It can achieve 20 - 130 in compression ratio within 2% of information loss.</li></ul>	

## PUBLICATION

- B. Lu**, X. Zhou, G. Forlenza, T. Prioleau, “Mealtime Prediction using Wearable Insulin PumpData to Support Diabetes Management,” Scientific Reports - Nature, 2024.
- B. Lu**, T. Prioleau, “Investigating the Reproducibility and Generalizability of Deep Learning Methods for Blood Glucose Prediction,” ML4H - Proceeding of Machine Learning Research, Under Review.
- P. Belsare, **B. Lu**, A. Bartolome, T. Prioleau, “Investigating Temporal Patterns of Glycemic Control around Holidays,” IEEE Eng. in Medicine and Biology Conference, July 2022.
- B. Bent, **B. Lu**, J. Kim, J.P. Dunn. “Biosignal Compression Toolbox for Digital Biomarker Discovery”. Sensors, 2021.

## SKILLS

**Programming:** Python, Android (Kotlin), Flutter, R, C, Git, Go, MATLAB, SQL, L<sup>A</sup>T<sub>E</sub>X

**Tools:** Scikit-Learn, Tensorflow, Pytorch, Pandas, Firebase, Google Cloud Platform, Docker

**Relevant Courses:** Deep Learning, Machine Learning and Statistical Analysis, Algorithms, Artificial Intelligence, Data Science, Mobile App Development, Human-computer Interaction.