

Hoon Shin

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EDUCATION

Harvard University

Bachelor of Arts, Computer Science. GPA: 4.0

Cambridge, MA

May 2025

Walter Payton College Prep

National Merit Finalist. Founder of AiLab.

Chicago, IL

June 2021

EXPERIENCE

Computational Biology Researcher

Choudhury Lab, Harvard Medical School

Feb. 2022 – Present

Boston, MA

- Uncovered novel relationships between aging, smoking, and gene expression in the human heart through analysis of single-cell RNA sequencing data on R
- Contributed results of analysis to projects which will be published in 2+ academic papers
- Organized a computational biology workshop for the lab covering the command line, R basics, and Seurat

Case Team Leader

Harvard Data Analytics Group

Sep. 2021 – Present

Cambridge, MA

- Developed several Bayesian models in Python to predict energy prices for a large aerospace corporation
- Contributed models to an open-source sustainability initiative backed by companies totaling over 400 billion dollars in annual revenue
- Co-led a team working for a major pharmaceutical company to evaluate the effectiveness of a long-term study design initiative
- Created a scalable R Shiny App to automatically analyze survey data and deliver insights to the client

Frontend Mobile Developer

Arda

Oct. 2021 – May 2022

Cambridge, MA

- Co-developed app for start-up aiming to improve vaccine access in The Gambia by up to 90x through drone deliveries
- Designed several detailed mock-ups for app screens on Figma
- Built screens on Android Studio and implemented navigation
- Integrated Mapbox to display real-time drone location and delivery route

PROJECTS

Track Chicago | *Flutter, Dart, Python*

June 2020 – Present

- Developed a cross-platform mobile app to track arrival times for Chicago trains and buses
- Gained access to real-time arrival data by reaching out to the Chicago Transportation Authority
- Published to [App Store](#) and [Google Play Store](#) gaining 1K+ downloads and an average 4.9/5 star review
- Implemented state management using Flutter's Provider class

Tackling Toxicity with Deep Learning | *Python, Tensorflow, Keras*

Oct. 2019 – Dec. 2019

- Explored the use of deep learning algorithms to classify the toxicity of online comments
- Sourced a 2 million comment dataset from Google's Conversation AI team
- Trained four LSTM and GRU architectures on the dataset
- Wrote [18-page paper](#) and presented project earning Distinguished award at the QED Math Symposium

TECHNICAL SKILLS

Languages: Python, C, SQL, Java, JavaScript, HTML, CSS, Dart, R

Frameworks: React, Flutter, Flask, Tailwind, Tensorflow

Developer Tools: Git, Android Studio, XCode, VS Code, RStudio

Libraries: pandas, NumPy, Matplotlib, DESeq2, Seurat, Keras