

# Avyuk Dixit

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## EDUCATION

### University of Michigan

BS in Computer Science, Minor in Mathematics; GPA: 4.0/4.0

August 2020 – May 2024

Ann Arbor, MI

- Courses: Data Structures and Algorithms, Software Engineering, Computer Organization, Algorithms for Data Science, Real Analysis, Probability Theory, Discrete Math, Linear Algebra
- Upcoming: Web Systems, Operating Systems, Theoretical Statistics, Stochastic Processes

## WORK EXPERIENCE

### Amazon

Incoming SDE Intern

May 2021 – August 2021

DC Metro Area (Virtual)

### Enterprise e-Support, Inc.

Software Developer Intern

June 2020 – August 2021

Springfield, VA

- **Proposal Bid Decision Tool:** Built and deployed internal web application in Flask and React to replace external tool for go/no-go decisions on request for proposals (RFPs). Total cost-savings of \$6000/yr.
- **Resume Parsing Utility:** Streamlined recruiting process by creating machine learning resume parsing utility in Spacy. Tool is now integrated with day-to-day operations at the company; used for ~5000 resumes/month.
- **Technical Proposal Lead:** Wrote technical approaches on agile development, software development lifecycle, and data science lifecycle. Approaches were used in multiple winning proposals with total contract value of ~\$150,000/year.

### Harvard Medical School

Machine Learning Researcher

June 2019 – December 2020

Baltimore, MD/Boston, MA

- Worked under guidance of Dr. Michael Vincent Boland on a project to assess glaucoma progression in patients from multiple data sources using machine learning (Convolutional LSTM). Model had 91% accuracy and 0.89 AUROC.
- **First-authored paper and published in peer-reviewed *Ophthalmology* journal**, the premier publication of the American Academy of Ophthalmology. DOI: <https://doi.org/10.1016/j.ophtha.2020.12.020>; *A. Dixit, J. Yohannan, M. Boland*

## PROJECTS

### Navsearch

Lead Developer

June 2021 – Present

Ann Arbor, MI

- Building save, search, and share bookmarking software. Built using Elasticsearch, FastAPI, React, Chakra UI, and Firebase. Deployed on Heroku. See here: <https://navsearch.herokuapp.com/>
- Pitched to 75 & Sunny VC, Zillow co-founder Spencer Rascoff's family office.

### Equity Dashboard

Side Project

July 2021 – Present

Ann Arbor, MI

- Building a personalized investment platform to help inform my investment decisions. Built with FARM stack.
- Features including valuation and dashboards for investment themes, semantic search over bookmarked research (using GPT-3), watchlist, commodity supply demand models, and notetaking. Informed alpha of >100% on personal portfolio.

### TJHSST Computer Systems Lab

Student Researcher

September 2018 – April 2019

Alexandria, VA

- Developed stacked machine learning algorithm that uses non-contact heart rate detection, pose estimation, and facial emotion recognition to determine instances of violent behavior in real time.
- First place in category, school, and regional science fairs. Grand Prize alternates for international science fair (ISEF).
- Worked with 17+ hours of video footage to train a model with ~80% accuracy.

## ACTIVITIES

### Atlas Digital Consulting

August 2020 – Present

- Pro-bono tech consulting (mobile/web dev, database management, and machine learning) for local businesses.

### Quantitative Investment Society

August 2021 – Present

- Leading project to create unsupervised learning model to identify opportunities for pairs trading and factor investing.

### Maize and Blue Endowment Fund

September 2021 – Present

- Student run fund managing \$700,000 of university's endowment. Pitched Zillow Group.

## PROGRAMMING SKILLS

**Languages:** Python, C++, JavaScript, R, SQL    **Technologies:** Tensorflow, FastAPI, React, Heroku, AWS, Git