

# Avyuk Dixit

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## EDUCATION

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### University of Michigan

BS in Computer Science, Minor in Mathematics; GPA: 3.99/4.0

August 2020 – May 2024

Ann Arbor, MI

- Courses: Data Structures and Algorithms, Computer Organization, Algorithms for Data Science, Programming Languages, Real Analysis, Probability Theory
- Upcoming: Operating Systems, Intro to Distributed Systems, Theoretical Statistics, Stochastic Processes

## WORK EXPERIENCE

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### Amazon Web Services

Software Development Engineer Intern

May 2022 – August 2022

Arlington, VA

- **Worked on the Fault Injection Simulator (FIS) Team:** AWS FIS is a fully managed chaos engineering service that make it easier to improve application performance and resiliency.
- **Log Consolidation Project:** Consolidated CloudWatch and S3 logs into FIS console to improve customer experience. Used Athena for querying and uncompressing gzip S3 logs. Built feature in TypeScript/React with native Polaris UI.
- **Feature deployed to production and used by 300+ customers** including Accenture, Verizon, and iRobot.

### Enterprise e-Support, Inc.

Software Developer Intern

May 2021 – 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.

### Harvard Medical School

Machine Learning Researcher

June 2019 – December 2020

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

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### Reshape

Side Project

January 2022 – May 2022

Ann Arbor, MI

- Natural language data analytics tool built with SQL, FastAPI, and Spacy. Landing page here: <https://reshape-io.github.io/>
- Won **Contrary Capital Build Sprint** and demoed to multiple potential customers including **Head of Analytics @ Intuit, Head of Sales @ Phantom Auto, CI Manager @ Google**

### Market Dashboard

Side Project

July 2021 – December 2021

Ann Arbor, MI

- Built platform to help inform investment decisions using FastAPI and React. Features include simplified DCF valuation, commodity supply/demand models, and semantic search over bookmarked research.
- Command line utility for fast options pricing and expected value analysis using Black-Scholes. Helped uncover systematic mispricing of Valaris warrants post-bankruptcy.

## ACTIVITIES

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### Atlas Digital Consulting

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

August 2020 – Present

### Quantitative Investment Society

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

August 2021 – Present

### Maize and Blue Endowment Fund

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

September 2021 – Present

## PROGRAMMING SKILLS

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**Languages:** Python, C++, JavaScript, Scheme, SQL

**Technologies:** FastAPI, React, Spacy, Keras, AWS, Git

**Interests:** Investing – I have a blog where I reflect on trades and write about new ideas/themes: <https://avyukd.github.io/blog/>