

# Zachary Jarnagin

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## 📁 PROFESSIONAL EXPERIENCE

### Data Engineer, *OMI*

04/2022 – present

Boston, MA

- Expanded over 13,000 patient histories with a novel clinical score from my SQL extraction logic.
- Delivered millions of data points to our data partners and stake holders.
- Ensured millions of patient records adhered to HIPAA protocols.

### Data Analyst in NLP, *Genentech*

09/2021 – 03/2022

South San Francisco, CA

- Guaranteed team funding with a question answering API with AWS Lambda, AWS S3, and AWS API Gateway to extract document metadata, allowing for instant annotation through a React application hosted on AWS Amplify.
- Built a BioBERT text classification model with 99% precision in less than a month.
- Combined a graph embedding convolutional network with a BERT model to improve performance and facilitate novel discoveries.

### Software Engineer Intern, *Google*

05/2021 – 08/2021

Boston, MA

- Saved millions of dollars by flagging bad actors with my multiclass GNN TensorFlow model, directly impacting over 4 million customers.
- Standardized GNN data representation across teams with my redesigned C++ and SQL graph neural network data pipeline.
- Engineered a JavaScript data visualization tool using D3.js for all Google Ads and Graph Mining teams to be used for heterogeneous graph work.

### Backend Developer, *Medneon*

02/2021 – 05/2021

Boston, MA

- Skyrocketed oncologist productivity with an end-to-end NLP pipeline to automatically annotate PDFs using AWS Lambda, EC2, EFS, and Fargate.
- Brought a surgical oncologist's dream to extract patient data to reality.

## 🎓 EDUCATION

### B.S. in Computer Science, *Northeastern University*

09/2018 – 05/2022

Boston, MA

- Student-Athlete Support Services tutor with 10% overall student performance increase

## 📁 PROJECTS

### Fullstack Engineer, *Tadpole Tutoring* ☑

A collaborative full-stack project that connects tutors to students. Built from the ground up, this project was deployed to be demoed to prospective high schools that wanted to use the service. The backend is created with SQLAlchemy and hosted on Heroku. The frontend is a responsive Typescript webapp.

### Monte Carlo Tree Search, Neural Networks, & Chess ☑

Chess agent capable of beating early versions of Stockfish (one of the strongest chess agents in the world). Collaborated with a partner to implement the MCTS in conjunction with a Neural Network.

## 📄 PUBLICATIONS

### Malignant Tumor Classification Model, *Analytics Vidhya* ☑

Shared my creation of an accurate model to determine whether or not a sample of breast tumor tissue is malignant or benign. Inspired by a Kaggle competition and achieved with Python, Pandas, and sklearn.

## 🏆 AWARDS

### Commissioner's Academic Honor Roll - Men's Outdoor Track & Field,

2018

*Colonial Athletic Association*

Awarded by the Colonial Athletic Association to student-athletes who earn at least a 3.00 GPA based on their fall academic term performance.