

Huy Hoang

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EDUCATION

Amherst, MA **University of Massachusetts Amherst** Sep 2018 – May 2022
Bachelor of Science | Majors: Computer Science, Mathematics; GPA: 3.84

- Member of Commonwealth Honor College, Departmental Honor
- **Courses taken:** Object Oriented Programming Data Structures and Algorithms, Operating Systems, Introduction to Computation, Web and Mobile Development, Artificial Intelligence, Computer Networks, Database Systems
- **Honors and awards:**
 - Dean's International Scholarship given to 7 out of 850 CS students with a history of high achievement, passion for computer science. August 2020
 - Dean's List for all semesters

WORK EXPERIENCE

Nuance Communications Inc. (Microsoft) Burlington, MA
R&D Software Engineer Intern – NDEP May 2021 – August 2021

- Researched on making BERT models training faster and more accurate for Mix Natural Language Understanding applications.
- Migrated Nuance Real Time service's logging framework from Log4j to Log4j2, fixed **50+** warnings and potential problems.
- Implemented an automation testing framework, improved tests runtime by **30%** and increased service uptime to **99%**.
- Contributed creative ideas in optimizing strategies that increased the precision rate by **15%**.

University of Massachusetts Amherst Amherst, MA
Undergraduate Research Assistant Jan 2020 – Present

- Under the supervision of Professor Marco Serafini in the Data Systems lab.
- Integrated Deep Graph Library to accelerate graph sampling for graph machine learning using GPUs.
- **Technologies:** Python, C++, CUDA, TensorFlow, dgl

Undergraduate Teaching Assistant Sep 2019 – Present

- Courses: **Computer Networks** – Fall 2021, **Reasoning Under Uncertainty** – Fall 2020, Spring 2021, **Introduction to Problem Solving** – Fall 2019.
- Duties: Organized weekly labs with 50 students and hosted office hours, graded homework and exams, led a team of four other TAs.

Cybozu Inc. Ho Chi Minh City
Software Engineer Intern – Core Dev and Infrastructure July 2020 – August 2020

- Developed a MongoDB database that can process up to **millions** of real time group records, implemented a caching design to handle duplication which reduces memory usage by over **30 times**, from **8GiB** to **256MiB**.
- Developed a large-scale web application for **distributed** system where users can manage food orders within groups. Handled frontend and backend using React/Redux and Node.js, HTTP with REST APIs.
- Deployed the developed applications on Heroku and integrated CircleCI to **automate scaling** and update.
- **Technologies:** Node.js, npm, Express.js, React/Redux, MongoDB, Redis, Heroku, Webpack, Babel

Hekate.ai Da Nang, Vietnam
Machine Learning Intern May 2019 – August 2019

- Worked with the ML Application Analysis Team on using Deep Learning to make Hekate.ai chatbot more power-efficient.
- Generated LSTM RNN models with Tensorflow to perform sentiment analysis and topic classification tasks.
- Built a recommendation engine for music and books using word2vec to help the virtual assistant more intelligent.

PROJECTS

Android Market (2020): A comprehensive analysis of the Android app market by comparing over **10000** apps in Google Play across different categories, using **seaborn** and **matplotlib** for plotting, **pandas** for analysis. Giving **recommendations** based on current trends in users' purchased apps as well as providing **statistical** analysis.

Math bot (2019): Built a **system** that can communicate with servers and solve the math problems that the server sends. The server sends the math problems and the clients reply with solved answers. Used **C** and **Linux socket API**

Online Swiping (HackUMass 2019): Built a web application that supports swipe up and check for meal plans before eating at the dining halls. Users can also keep track of the number of meal swipes left and the record of their frequencies of visits for each dining hall. Used **HTML/CSS/JavaScript, Python**.

SKILLS

Programming Languages: Python, C/C++, Java, Go, JavaScript/ES6, R, SQL, HTML5/XML, CSS

Technologies: Spark, Kafka, Redis | PostgreSQL, MongoDB | scikit-learn, PyTorch, TensorFlow, numpy, scipy

Others: Git, Linux, Docker, Kubernetes, Google Cloud, Azure, AWS