

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 top 1% students with a history of high academic achievement and leadership in computer science.
 - Dean's List for all semesters.
 - Alpha Lambda Delta for first year academic excellence.
 - Phi Kappa Phi.

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
- Played an integral role in a ground-up rebuild of the Nuance Live Chat portal
- Migrated Nuance Real Time service's logging framework from Log4j to Log4j2, fixed **50+** warnings 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 May 2020 – Present

- Integrated Deep Graph Library to perform graph sampling on GPUs and improve NEXTDOOR system efficiency with Prof. Marco Serafini
- Utilized DeepWalk representation learning algorithms for to produce minibatches that are suitable for DNNs
- 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.

Summer Undergraduate Research Fellow May 2020 – August 2020

- Worked with prof. Erik Learned-Miller using Computer Vision to develop an automatic method for quantifying the percentage of people wearing face masks on the streets of Amherst city.
- Ran a face detector and trained a deep neural network classifier to distinguish between people with and without facemasks. The project involved multiple research and development activities from data collection and annotation to model training and evaluation. The results of the internship were outstanding: a dataset of more than ten thousand faces was collected and annotation and the accuracy of the trained classifier exceeded 95%.

Cybozu Inc. Ho Chi Minh City
Software Engineer Intern – Core Dev and Infrastructure July 2019 – August 2019

- 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 – July 2019

- Worked with the ML Application Analysis Team on using Deep Learning to make Hekate.ai chat bot 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
- Technologies: **Pytorch, Keras, NLP, Fastai, Transformers, Gensim, SpaCy**

SKILLS

Languages: Python, C, C++, Java, JavaScript, Shell Scripting, MATLAB

Technologies: PyTorch, TensorFlow, Transformers, OpenCV, scikit-learn, numpy, scipy, matplotlib | React/Redux, Node.js | MongoDB, SQL

Others: Git, Android, bash scripting, Linux, ROS