Khiem D. Phi

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EDUCATION

Stony Brook University | PhD. Computer Science, GPA: 3.84 May. 2026 (Expected)
Stony Brook University | B.S Computer Science (Honors) with Minor in History, GPA: 3.72 May. 2021

WORK EXPERIENCE

Graduate Teaching Assistant – **Department of Computer Science** Aug. 2021 – Now
- Administered homework and final-exam grading standards for a group of 5 undergraduate Teaching Assistants
- Updated homework assignments and solutions that is suitable for a class of 100 students
- Build 20 unit-test suites using OCaml, Java and Ocaml libraries to automate programming assignments grading

Graduate Research Assistant – **Knowledge Systems Lab** Aug. 2021 - Now
- Assembling an occlusion-aware transformer architecture for object detection and pose estimation with RGB-D images
- Directing a team of 2 M.S students to design a 6D Pose Estimation algorithm with 20% more accurate results
- Coordinating 3 annotators to build a real-world object dataset with 30% more examples than recent datasets

Software Engineering Intern – **Data Management and Biomedical Data Analytics Lab** Aug. 2020 – May 2021
- Developed an iOS app (EyeCanDo) that allows a disabled ALS patients to use mobile devices with their eye-gaze
- Advanced an algorithm for patients to select menu options in the application 50% faster using facial recognition
- Collaborated with another intern to design a new UI that is 30% more user-friendly based on user case studies

Undergraduate Research Assistant – **Computer Vision Lab** Dec. 2019 – May 2021
- Modified a neural network model to identify abandoned objects in surveillance footage with a 70% precision.
- Directed a team of 10 data-collectors and annotators to collect and annotate ~50k Google Street View images
- Experimented with semantic segmentation models that utilizes 19 channels leading to 10% improved performance

Undergraduate Research Assistant – **Stony Brook University AI Institute** Dec. 2019 – May 2021
- Devised a data crawler with the YouTube API to collect a dataset of ~10k comments for political sentiment analysis
- Simplified a set of 1000 JSON files into a remote NoSQL database for 20% better ease of access for team members
- Modeled sentiment analysis tasks using multi-task context-based transformer models that improved accuracy by 15%.

Applied Research Intern – **VinAI Research** Jun. 2020 – Sept. 2020
- Formulated Mask-RCNN's Regional Proposal Network into a simplified version that increased training speed by 20%
- Delivered a trash-detection application that was amongst 7 finalists in an internal application design competition

Undergraduate Research Assistant – **Human Language Analysis Beings Lab** Jun. 2020 – Sept. 2020
- Implemented a deep-learning model to simulate Singular-Value Decomposition (SVD) with 15% higher accuracy
- Organized user blog datasets of ~20k users by using MySQL and the DLATK framework on a remote Linux cluster
- Overhauled Bash scripts to transfer large datasets from local machine to GPU server with a 50 percent speed-up

VOLUNTEER EXPERIENCE

High School Computer Science Mentor – **Eastern Mennonite High School** Apr. 2020 – Aug. 2020
- Created mentorship program to provide computer science education with custom machine learning coursework
- Guided 3 students to develop Android applications as well as machine learning projects
- Coordinated with a group of local high school science teachers to have a trial program run for 4 months

Next Generation Science Competition Mentor – **Stony Brook University** Aug. 2017 – Dec. 2018
- Advised 20 high-school students in machine and robot design to develop a robot that integrates sensors and motors
- Hosted private short lectures on basics in robot programming in C for groups of 20 students
- Advised 20 high-school students in machine and robot design to develop a robot that integrates sensors and motors

PUBLICATIONS

EyeSayCorrect: Eye Gaze and Voice Based Hands-free Text Correction for Mobile Devices ACM IUI 2022
Maozheng Zhao, Henry Huang, Zhi Li, Rui Liu, Wenzhe Cui, Kajal Toshniwal, Ananya Goel, Andrew Wang, Xia Zhao, Sina Rashidian, Furqan Baig, **Khiem Phi**, Shumin Zhai, , IV Ramakrishnan, Fusheng Wang, Xiaojun Bi