

Duc Nguyen

CONTACT INFORMATION	28 N College St Carlisle, PA 17013	(223) 269-7844 nguyeduc@dickinson.edu
EDUCATION	Dickinson College, Carlisle, PA B.S. Mathematics, May 2025 GPA: 3.87 Dickinson College, Carlisle, PA B.S. Computer Science, May 2025 GPA: 3.87	
HONORS AND AWARDS	Dickinson College Dean's List Bronze Prize Vietnamese National Mathematic Olympiad Bronze Prize at the VIASM Student and Student Olympiad Champion at Finnovation 2022 1st Runner-up at Zone Bootcamp 2022	
PUBLICATION AND PREPRINT	Kinlaw, P., Nguyen, D., & Cheng, W. (2024). The Reciprocal Sum of Even Pseudo-primes. Zenodo. https://doi.org/10.5281/zenodo.14318377 Nguyen, D. (2024). A Survey of algorithms for maximum matching in Bipartite and general graph. Zenodo. https://doi.org/10.5281/zenodo.14322333	
EMPLOYMENT AND EXPERIENCE	Hyson Lab Undergraduate researcher & Collaborator Oct 2024 - Present <ul style="list-style-type: none">Designed and implemented an image compression layer leveraging Fourier Transform for 3D images, reducing dimensions from BxCxDxHxW to BxCxRxRxR while achieving exceptional performance on medical segmentation datasets.Developed a comprehensive training pipeline for training and evaluation on 3D benchmark datasets, including Synapse, ACDC, and BRATS. Venera AI Machine Learning Enginner—Software Engineer Intern Sep 2024 - Present <ul style="list-style-type: none">Reduced OCR response time for parsing clients' medical records by 20% and eliminated hallucinations by developing a multi-stage strategy combining Tesseract with GPT-4 output refinement.Contributed to the first-ever Vietnamese medical benchmark paper by collecting, processing, and translating over 200,000 medical records, ensuring accuracy and accessibility for research purposes.Developed a comprehensive AI Medical Assistant feature to provide personalized healthcare advice based on clients' medical records. LOCH Technology Software Engineer Intern May - August 2024 <ul style="list-style-type: none">Developed and launched a sophisticated metric dashboard utilizing React.js and Node.js, enhancing data visualization for wireless and wired networks; led to 30% faster incident response times across the engineering team.Engineered and launched a set of APIs that collected data from RunZero, Wiggle, and Shodan to enhance data aggregation processes; reduced integration time by 5 hours.	

- Applied multiple-query optimization to MySQL database, reducing average response times from queries to less than 200 milliseconds.

CocCoc LLC

Software Engineer Intern Intern

May - Aug 2024

- Engineered and maintained a browser microservice for file uploads and downloads to AWS S3 that handles files of maximum size 10 GB and reduce request time to under 100 ms by leveraging the Gin Gonic framework in Golang.
- Containerized 2 microservice using Docker and successfully deployed into a Kubernetes cluster, ensuring scalability and efficient resource management.
- Authored comprehensive integration and unit tests using Postman and Go Test, achieving 100% test coverage and enhancing the reliability and robustness of the service.

VinBrain (Acquired by NVIDIA)

Machine Learning Engineer Intern

May - Aug 2023

- Ensembled and fine-tuned hyperparameters of Convolutional Neural Network models to detect and segment anomalies on 2D chest image dataset, achieving 92% mean AUC using Pytorch.
- Improved code quality by refactoring the data preprocessing and python metrics files of the rectal cancer project, reducing the code size by 30 %.
- Streamlined preparation of medical data for the training pipeline by creating efficient scripts, allowing a 20% faster augmentation stage.

PolymathJr

Undergraduate Researcher

May - Aug 2023

- Conducted survey on topic maximum matching in Bipartite and general graph.
- Implemented Hopcroft-Karp algorithm in Python for visualization

SKILL AND DOMAIN Knowledge

KNOWLEDGE

Machine Learning, Computer Vision, Medical Image Processing, Software Programming, Number Theory

Skills

Python, JavaScript, Golang, Java, C++, Docker, Kubernetes, Gin Gonic, React.js, Redux.js, Prisma, GraphQL, Nest.js, Next.js Node.js, Pytorch, Express.js, Moleculer.js, Tailwind.css, Vue.js, Maven, Postman, Swagger, Kafka, RabbitMQ, AWS SQS, MongoDB, Cassandra, Redis, PostgreSQL, Kafka, RabbitMQ, AWS SQS, Sequelizer, Jest, Cypress, Git, Bash, GitHub Action, TypeScript. HTML, CSS, FFmpeg, WebRTC.