NGOC-QUANG NGUYEN

Ph.D. Candidate in Computer Science

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🎓 EDUCATION

Korea University
Ph.D , Computer Science and Engineering

Sep 2020 - Present
Advisor: Jaewoo Kang

Gachon University
MSc, Computer Science and Engineering

Sep 2017 - Jul 2019
Advisor: Sangwoong Lee

Vietnam National University, Hanoi
BEng, Mechanical Engineering

Sep 2012 - Mar 2017

💼 EXPERIENCE

DMIS lab
Drug discovery

Sep 2020 – Present
Machine learning and AI researcher

- May 2023 - Dec 2023: Collaborated with **AIGEN Sciences** on predicting compound-protein interactions utilizing multi-level features.
- Mar 2022 - Mar 2023: Collaborated with **SK-Nexilis** on predicting material properties and making recipe recommendation system.
- Analyzing large-scale datasets from various sources such as biochemical assays such as: BioLiP, PDBbind, DUD_E, Davis, KIBA, Metz.
- Building deep learning models and algorithms predict protein-compound interactions mainly focusing on multimodal learning.
- Developing models to capture 3D geometric information with Equivariant neural networks.

Voronoi Inc
Drug discovery

Aug 2019 - Jul 2020
Machine learning and AI researcher

- Developed and applied reinforcement learning techniques for small molecule generation.
- Predicted compound properties with deep neural networks.
- Collaborated with biologists, chemists, and other researchers to design experiments, validate predictions, and optimize experimental conditions.

PRML lab
Computer Vision

Sep 2017 - Jul 2019
Machine learning and AI researcher

- Medical imaging analysis (image segmentation for seeking lung, colon, and breast tumors).
- Face recognition: automatic door recognition (used face to open the lab door).

NTQ Solution
Robotics

Jun 2015 - Sep 2015
Robotic engineering intern

- Built guidance robot with Raspi kit controlled by gaming remoter.

📖 PUBLICATIONS

Journal publications

MulinforCPI: enhancing precision of compound-protein interaction prediction through novel perspectives on multi-level information integration

Ngoc-Quang Nguyen; Sejeong Park; Mogan Gim; Jaewoo Kang   **Briefings in Bioinformatics, 2023**

PerceiverCPI: A nested cross-attention network for compound-protein interaction prediction

Ngoc-Quang Nguyen; Gwanghoon Jang; Hajung Kim; Jaewoo Kang   **Bioinformatics, 2022**

Contour-aware Polyp Segmentation in Colonoscopy Images using Detailed Upsampling Encoder-Decoder Networks

Ngoc-Quang Nguyen; Duc My Vo; Sang-Woong Lee   **IEEE Access, 2020**

Robust Boundary Segmentation in Medical Images Using a Consecutive Deep Encoder-Decoder Network

Ngoc-Quang Nguyen; Sang-Woong Lee   **IEEE Access, 2019**

Classification of breast cancer histology images using incremental boosting convolution networks

Duc My Vo; **Ngoc-Quang Nguyen**; Sang-Woong Lee   **Information Sciences, 2018**

Conference publications

Colorectal segmentation using multiple encoder-decoder network in colonoscopy images

Ngoc-Quang Nguyen; Sang-Woong Lee   **AIKE, Laguna Hills, 2018**

🏆 HONORS & AWARDS

Excellent paper award	Feb 2023, Korea University
Research scholarship	Sep 2020 - Sep 2022, Korea University
Foreign natural sciences and engineering scholarship	Sep 2020 - Sep 2022, Korea University
Full tuition fee scholarship	Sep 2017 - Jul 2019, Gachon University

🔧 SKILLS

EDA, Statistics, Modeling, Communication.
Technique Languages: Python, Java, C#.
Others: AWS Unix/Linux, working cross-functionally.
Languages: English (advanced), Korean (beginner), Vietnamese (native).