

## Yuan Tang

Email: [naomitangyuan@gmail.com](mailto:naomitangyuan@gmail.com) | Phone: (412) 214-2357 | LinkedIn: [linkedin.com/in/tangyuan9028/](https://www.linkedin.com/in/tangyuan9028/)

### EDUCATION

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|---|----------------------|
| <b>Carnegie Mellon University</b>   | Pittsburgh, PA       |
| Master of Science in Electrical and Computer Engineering  | Dec 2022             |
| <ul style="list-style-type: none"><li>Current Coursework: Foundations of Computer Systems, Machine Learning.</li></ul>  |                      |
| <b>Nanyang Technological University</b>   | Singapore, Singapore |
| Bachelor of Engineering in Electrical and Electronic Engineering, Minor in Mathematics  | Jun 2021             |
| <ul style="list-style-type: none"><li>Honours (Highest Distinction); Dean's List AY2020-2021; CGPA: 4.80 / 5.00.</li><li>Specialization: Computer Engineering and Data Intelligence.</li><li>Relevant Coursework: Data Structure and Algorithms, Web Application Design, Database Systems, Computer Networks.</li></ul> |                      |

### SKILLS

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|------------------------|--|
| Programming Languages: | C, C++, Python, SQL, R, MATLAB, HTML/CSS, JavaScript, PHP.     |
| Frameworks:            | Unix/Linux, Docker; MySQL, Hadoop; PyTorch, TensorFlow, Keras. |

### INTERNSHIP EXPERIENCE

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| <b>Alibaba Group</b>   | Hangzhou, China      |
| <i>Machine Learning Engineer Intern</i>  | Jul 2021 – Aug 2021  |
| <ul style="list-style-type: none"><li>Developed an industry-level recommendation model in TensorFlow to provide personalized food recommendation for over 10 million daily users; model increased click through rate prediction AUC by 2% comparing with existing one.</li><li>Initiated a spatial-temporal modeling project from problem identification, data analysis, research to development; SQL queries are constructed to analyze user behavior with tables with billions of entries on a large-scale distributed platform.</li></ul> |                      |
| <b>Shopee</b>  | Singapore, Singapore |
| <i>Data Scientist Intern</i>   | Jun 2020 – Aug 2020  |
| <ul style="list-style-type: none"><li>Enhanced existing machine translation model by implementing a novel transformer to allow additional categorical information in training, achieving an average of 0.58 BLEU score improvement in a multilingual machine translation task.</li><li>Developed an optimized multilingual sub-word tokenization model to reduce memory and time consumption for corpus pre-processing, improving baseline Chinese-English machine translation model by 2 BLEU scores.</li></ul>                             |                      |
| <b>Hikvision</b>   | Hangzhou, China      |
| <i>Machine Learning Engineer Intern</i>  | Jun 2019 – Aug 2019  |
| <ul style="list-style-type: none"><li>Built a multi-label text classification model using ELMo embedding and TextCNN to extract sentiment information from e-commerce website customer reviews for product team to analyze feedback; model obtained accuracies over 0.9 in 17 categories.</li></ul>  |                      |
| <b>ViSenze</b>   | Singapore, Singapore |
| <i>Data Analyst Intern</i>   | Mar 2019 – May 2019  |
| <ul style="list-style-type: none"><li>Automated processes to create standardized deep learning image datasets and to evaluate image classification model performance based on metrics; these helped to reduce work time for non-technical staff from 2 hours to 1 minute.</li></ul>  |                      |

### PROJECT EXPERIENCE

|   |                     |
|---|---------------------|
| <b>Machine Learning based Medical Image Analysis, Research Project (NTU)</b>  | Jan 2020 – May 2021 |
| <ul style="list-style-type: none"><li>Implemented an image classification algorithm for pneumonia detection in TensorFlow with detection accuracy over 0.96; model was deployed at a local hospital for fast COVID-19 screening, receiving over 300 patients daily.</li><li>Constructed multi-organ medical image segmentation models to segment organ regions from background for radiologists prior to diagnosis; one semi-supervised method outperformed state-of-the-art by 2% in accuracy.</li></ul> |                     |
| <b>Web Application for Food Delivery Platform, Course Project (NTU)</b>   | Aug 2020 – Dec 2020 |
| <ul style="list-style-type: none"><li>Built a website for food delivery services, with functions including login, order, checkout, and history viewing, utilizing HTML and CSS to design front-end web page, SQL for database updates and queries, and function calls using JavaScript and PHP.</li></ul>   |                     |
| <b>HPC Enabled CNN in Recognition of Hand Motion, Research Project (NTU)</b>  | Nov 2018 – May 2019 |
| <ul style="list-style-type: none"><li>Created an application in OpenCV and PyTorch utilizing a region ensemble network to predict 3D hand joints, serving as a toolkit to assess risk of rheumatoid arthritis at low cost by visualizing and measuring angle and speed of hand motions.</li></ul>   |                     |