VIET-HOANG DONG

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EDUCATION

SMU School of Computing and Information Systems, Singapore
January 2022 - Now
Ph.D in Computer Science

University of Engineering and Technology, Vietnam National University, Hanoi
August 2016 - July 2020
Major: Computer Science, Honor Program
Graduate Grade: Distinction
Thesis: *"Intent analysis and identification for E-commerce search queries"* (Grade - 4/4)

EXPERIENCE

Vietnam National University, Hanoi *August 2020 - August 2021*
Teaching and Research Assistant

- Responsible for grading assignments of Data Structures and Algorithms course.
- Provides supervising instructor information on each student's achievement and progress to assist the instructor in the evaluation of each student.
- Prepared lesson plans and conducted classroom presentations on course's practice module.
- Monitored student activity in class, and provide guidance in course development.

AIPI JSC, OSP-Global *May 2019 - June 2020*
Data Scientist

· On-site internship under this leading construction company.

- Research and implement **Keyword Extraction system**, which extracts importance words, phrase from Vietnam articles to show over content on each article.
  Algorithms: TF-IDF, TextRank, SingleRank.
- Research and implement **Name Entity Extraction system**, which extracts importance Name-entity (person, location, organization, etc.) from Vietnam news.
  Algorithms: Bi-LSTM, CRF, N-gram, Contextual String Embeddings.
- Research and implement **Relevance News Content system**, which processes all news from database and gives top articles having the same content with input news as output and apply to NewsAi application.
  Algorithms: high-performance K-nearest neighbors, TF-IDF, KD-Tree.
- Research **Articles Classification** to label raw articles and match with predefined category.
  Algorithms: Maximum Entropy, Support Vector Machine (SVM), Linear Bag of Words classifier.
- Research and implement **Customer Segmentation module**, which is a part of Big Data project to divides customers into homogeneous groups. For each group, proposed different strategies and relevant campaigns to improve user engagement and retention.
  Algorithms: Expectation-maximization, K-Means clustering, RFM Metrics.

Sendo JSC, Hanoi *May 2019 - August 2020*
AI Research collaborator

- Research **Logo Detection system**, which detects famous brands from retailer's image on E-commerce platform, reduce human effort in fake products recognition.
  Algorithms: YOLOv3, INCEPTIONv3.
- Research **User's intent identification in E-commerce search queries**, focused on analyzing user's search intention from real search queries of e-commerce platforms and improving performance of search engines.
  Algorithms: Bi-LSTM, CRF, Fasttext.

Data Science and Knowledge Technology Laboratory, UET, VNU *Summer 2018 - Present*
Research Student

- Research Fairness risks and solutions in recommender systems.
- Research about Data Mining.
- Implement experiment of Fuzzy and Rough Set.
- Involved in a project on **Fraud detection system**, which automatically detects outlying transaction in e-commerce.

ACHIEVEMENTS

- Third Prize in The Scientific Research Conference for Undergraduates 2020 at UET-FIT with project *"Intent analysis and identification for E-commerce search queries"*
- Scholarship for top 5% excellent students at University of Engineering and Technology.
- Achieved rank 7^{th} at VLSP-Shared Task 2019: Hate Speech Detection

RESEARCH INTEREST

- Recommender Systems: Fairness measures, Basket-sensitive algorithms, Association rule.
- Text Mining: Text classification, clustering, information retrieval, etc.
- Natural Language Processing: Document Summarization, Named Entity Recognition, Language Modeling, Keywords extraction, etc.

PUBLICATION

- **Collaborative Fair-is-Better Filtering for Implicit Feedback**. Hoang V. Dong, Huu-Quang Nguyen, Hoang D. Nguyen and Duc-Trong Le. *International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES-24)*
- **A Contrastive Framework with User, Item and Review Alignment for Recommendation**. Hoang V. Dong; Yuan Fang; Hady W. Lauw. *The 18th ACM International Conference on Web Search and Data Mining (WSDM-25)*

SKILLS & BACKGROUND KNOWLEDGE

Programming	Python, Java, C/C++, Spark
Data analysis	Classical data analysis to clustering, data pipeline for Data analysis
English	Working proficiency
Others	Data structure, LaTeX/Markdown, Object-oriented programming