Trung Hieu Tran

saodem74.github.io trunghieu-tran google-scholar

trantrunghieu7492@gmail.com

(206)-536-6404

Research Interests

Software Engineering, Data Analysis, Big Data, Transfer Learning, IoT Data Discovery, Cloud Computing;

Education

- **University of Texas at Dallas** — Texas, USA
  Ph.D, Software Engineering, Ranked 7-th US in Software Engineering/ M.S, Computer Science — *2018 – 2022 (anticipated))*
- **Volgograd State Technical University** — Volgograd, Russia
  B.S., Software Engineering — *2011 – 2016*

Experience

- **Facebook Inc.** — *Incoming - Melon Park, CA, 2022*
  - **Research Scientist** - Accepted a fulltime job offer to work as Research Scientist in 2022 after my Ph.D. graduation.
- **Facebook Inc.** — *Melon Park, CA, Summer 2021*
  - **Ph.D. SE Intern** - Built an infrastructure to support personalization signals in commerce search stack in Facebook App including retrieval stage, featuring data for learning model in ranking stage.
- **Apple Inc.** — *Cupertino, CA, Spring 2021*
  - **Ph.D. SE Intern** - Designed and deployed an internal system to manage a large number of acoustics data models; that contains indexing, searching, and recommendation system for metadata; 2D and 3D visualization for data analysis.
- **PageBites, Inc | imo.im messenger** — *San Francisco Bay Area, CA, Summer 2020*
  - **Software Engineer Intern** - Worked on core microservices of imo messenger; Improved CI/CD pipeline running time with x2- x3 times faster; Built an automatic code review tool to detect bugs, vulnerabilities, and code smells; Improved services performance and optimized Redis memory; Deployed new services for monitoring Redis memory.
- **Coc Coc Search** — *Hanoi, Vietnam, 2016-2018*
  - **Data Analyst** - Crawled and indexed 5+ billion websites to big data warehouse. Maintained a very large scale system of searching and ranking. Detected duplication of webpages and documents with locality sensitive hashing.
- **University of Texas at Dallas** — *Richardson, TX, 2018 - present*
  - **Research Assistant** - Related to my research interests above;
  - **Teaching Assistant** - Courses: Automata Theory; Software Testing; Computer Network Security; Cluster Computing Algorithms; Computer Science I; Software Architecture; Real-Time Systems.

Selected Publications

- TLETA: Deep Transfer Learning and Integrated Cellular Knowledge for Estimated Time of Arrival Prediction. 25th IEEE International Conference on Intelligent Transportation Systems 2022 **(IEEE ITSC 2022)** (accepted)
- Automated Integrated Service Composition for Dynamic IoT Systems. The 6th IEEE International Conference on Smart Internet of Things **(IEEE SmartIoT 2022)** (accepted)
- Into Summarization Techniques for IoT Data Discovery Routing. ACM/IEEE International Conference on Cloud Computing 2021. **(CLOUD 2021)** - Top conference in Cloud Computing. (Paper).
- Recovering Variable Names for Minified Code with Usage Contexts. In Proceedings of the 41st ACM/IEEE International Conference on Software Engineering (ACM/IEEE **ICSE 2019** - Rank 1st in Software Engineering, Ranking: A*) (Paper).
- Graph-based Mining of In-the-Wild, Fine-grained, Semantic Code Change Patterns. In Proceedings of the 41st ACM/IEEE International Conference on Software Engineering (ACM/IEEE **ICSE 2019** - Rank 1st in Software Engineering, Ranking: A*) (Paper).
- Feature-Interaction Aware Configuration Prioritization for Configurable Code. in Proceedings of the 34th ACM/ IEEE International Conference on Automated Software Engineering (ACM/IEEE **ASE 2019** - Rank 10th in Software Engineering, Ranking: A) (Paper).
- Does BLEU Score Work for Code Migration?. In Proceedings of the 27th IEEE International Conference on Program Comprehension (ACM/IEEE **ICPC 2019**) (Paper).
- Detection and Prediction of Users Attitude Based on Real-Time and Batch Sentiment Analysis of Facebook Comments. The 5th International Conference on Computational Social Networks (**CSoNet 2016**) (Paper).

Professional Services

- Reviewer for several Top Conferences: ICSE (Ranked A*), FSE (Ranked A*), ASE (Ranked A), WWW (Ranked A*), IEEE ICWS 2022 (Rank A)

Selected Projects

- **Transfer Learning for IoT Data** - Working on deep transfer learning model to address traffic tasks for IoT data (continuing).
- **IoT Data Discovery** - Built novel routing algorithms for large and growing scale IoT networks; Investigated in depth the routing table summarization techniques to support space-efficient; Investigating new transfer learning systems for IoT data streams;
- **JSNeat** - Introduced an information retrieval based approach to recover the variable names in minified JS code by searching for them in a large corpus of open-source using relation graph, fuzzy set and topic modeling.
- **Sentiment Analysis** - Build a real-time sytem for sentiment text analysis with NLTK; Detect and predict sentiment patterns with batch processing for Facebook comments.
- **Blocks Supervised** - An open source plugin on Moodle that allows teachers to plan and start supervised sessions in a learning management system.

Skills

- **Languages** - Java, C/C++, Python, Bash, PHP, Hack, JS, SQL, Scala;
- **Technologies** - Maven, Spring, TensorFlow, Scikit-learn, Hadoop, HDFS, Apache Spark, AWS, Redis Database, OpenTSDB, Kafka, Microservices, Apache ZooKeeper, Puppet, Cassandra, Hive;
- **Knowledge** - Data Mining, Data Analysis, Program Analysis, Machine Learning, Natural Language Processing, Crawling and Indexing, Artificial Intelligence, Cloud Computing, IoT Network, BigData.

Academic Honours and Awards

- **Scholarships** - for Ph.D., M.S., B.S degrees
- **Second Prize** - in ACM-ICPC Northeastern Europe Regional Programming Contest NEERC
- **Awards** - in multiple Russian Programming Contests, Vietnamese National Olympiad in Informatics

References

- **Dr. I-Ling Yen** - Professor, University of Texas at Dallas - ✉ ilyen@utdallas.edu
- **Dr. Farokh B. Bastani** - Professor, University of Texas at Dallas - ✉ Farokh.Bastani@utdallas.edu
- **Dr. Maxim Shcherbakov** - Professor, Volgograd State Technical University - ✉ maxim.shcherbakov@vstu.ru