TUAN A. TRAN

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SUMMARY

I am an ML engineer and with 10+ years of experience in software engineering and applied AI research (Natural Language Processing - NLP, Knowledge Graph, Autonomous Driving).

EDUCATION

Leibniz University Hannover   *Hannover, Germany*
Doctor of Natural Sciences (Dr.rer.nat) — Magna cum laude   August 2018
- Topic: Natural Language Processing & Knowledge Graph

Saarland University, Max Planck Institute for Informatics   *Saarbrücken, Germany*
Master of Computer Science — Graduated with Distinction (Grade: 1.3)   May 2011
- International Max Planck Research School Master Fellowship
- Relevant Courses: Database, Artificial Intelligence, Software Engineering, Large-scale Graphs, Practical Security

Hanoi University of Science and Technology   *Hanoi, Vietnam*
Bachelor of Engineering — Graduated with Excellence (Grade: 8.9 / 10)   May 2008
- Excellent student research award
- Major: Computer Science (Minor: Information Systems)

High School for Gifted Students, Hanoi University of Science   *Hanoi, Vietnam*
High school Diploma — Graduated with Excellence (Grade: 54 / 60)   May 2003
- Member of National Mathematics Olympiad team

WORK EXPERIENCE

Senior Machine Learning Engineer   Feb 2023 - present
Meta Platforms   *Stuttgart (remote), Germany*

Senior Expert   Nov 2022 - Feb 2023
Robert Bosch GmbH — Mobility Solutions   *Stuttgart, Germany*
- Build an end-to-end ML prototype to win customer buy-in in field data quality management projects.
- Delivered 2 models for mainstream products, integrate with internal dashboard.

Technical Lead   Sep 2020 - Oct 2022
Robert Bosch GmbH — Global Services division   *Stuttgart, Germany*
- Lead engineering team to build a ML system that reduced processing time of customer requirements to **85%** using hybrid models (NLP, Near-Duplicate Detection, rule-based classifiers).
- Work with DevOps team to streamline models from in-house GPU cluster to AWS EKS for 3 customers.
- Support product owner and project leader in talk with stakeholders, help grow team (3 in 2019 to 11 in 2022).

Senior R&D Engineer   Jan 2020 - Oct 2022
Robert Bosch GmbH — Mobility Solutions   *Abstatt, Germany*
- Developed Minimal Viable Products with autonomous driving team for internal use cases:
  - Brake Analysis: Processed 100 TB measure data to allow visualization in in-house dashboard (QlikSense).
  - Road Sign Recognition: Processed public and internal data (28 countries), developed retrieval and augmentation service for an in-house labelling tool that led to **13%** model improvement.
- Contribute to publicly-funded project KI-Wissen (Work package 1.4 - Knowledge extraction).

- Collaborate with corporate research: 4 internal reports, 1 patent application, 5 peer-reviewed publications.

Interim Sub-project Leader, Product Owner — Jan 2020 - August 2020
Robert Bosch GmbH —Mobility Solutions — *Abstatt, Stuttgart, Germany*

- Led an internal incubation project, defined roadmap with cross-functional teams, successfully integrated to a corporate top-level project, adding 3 more headcounts for the department.

Development Engineer — Sep 2017 - December 2019
Robert Bosch GmbH — Mobility Solutions — *Abstatt, Germany*

- Developed ETL to process internal video data; built semantic search functions (ElasticSearch, Stardog)
- Developed AI model to classify brake quality from test bench data with 80% accuracy using gradient boosting.

Research Intern — Jun 2016 - Sep 2016
IBM Research — *Dublin, Ireland*

- Extracted decision elements from meeting transcripts (project Debater)

Research Software Engineer — Aug 2011 - Aug 2017
L3S Research Center — *Hannover, Germany*

- Worked in 3 EU research projects (Qualimaster, ForgetIT, GLOCAL)

Freelancer Software Engineer — Oct 2008 - Feb 2009
SaltLux — *Seoul, Südkorea*

Backend Software Developer — Apr 2008 - Oct 2008
Viet Intelligences — *Hanoi, Vietnam*

EXTRACURRICULAR ACTIVITIES

2021	Member of Bosch Developer Advocate Network - DAN (gave internal tech talks & tutorials)
2020	Participated in nuScenes prediction challenge (top 4 finalists)
2016	Presented project results in CeBIT expo
2016	External reviewer WSDM 2016
2013	External reviewer RecSys 2013

SKILLS

Languages	Python, Java, Go, Bash, SQL
Platforms	Linux, Hadoop, AWS, HPC
Automotive process	V-Model (ASPICE), Functional safety standards (IEC 61508, ISO 26262)
Soft Skills	Agile (Scrum, SAFe), leadership (SCARF, situational), project management

SELECTED PUBLICATIONS (in industry. See Google Scholar for publications in academia during PhD)

2022	**System and Method for Road Sign Ground Truth Construction with a Knowledge Graph and Machine Learning**, US Patent App. 17/004,133. (See arXiv paper) Ji-Eun Kim, Cory Henson, Kevin Huang, **Tuan Tran**, Wan-Yi Lin.
2021	**Feasible and Adaptive Multimodal Trajectory Prediction with Semantic Maneuver Fusion**, IEEE International Conference on Robotics and Automation (ICRA) (link). Hendrik Berkemeyer, Riccardo Franceschini, **Tuan Tran**, Lin Che, Gordon Pipa.
2019	**Using Knowledge Graphs to Search an Enterprise Data Lake**, European Semantic Web Conference (ESWC) (link). Stefan Schmid, Cory Henson, **Tuan Tran**.
2018	**A Trio Neural Model for Dynamic Entity Relatedness Ranking**, The SIGNLL Conference on Computational Natural Language Learning (CoNLL) (link). Tu Ngoc Nguyen, **Tuan Tran**, Wolfgang Nejdl.

LANGUAGE PROFICIENCY

Vietnamese (*native*)   English (*business fluent*)   German (*good*)