Khoi-Nguyen Tran

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Research Scientist Profile

Research Scientist with hands-on experience using predictive modelling, data processing, text mining, and machine learning to solve challenging business problems. Demonstrated success developing practical AI solutions for business, delivering DS and ML products, leading projects, and collaborating with teams. Strong knowledge in R, Python, Java, SQL, deep learning, and natural language processing.

Proven expertise in:

- Project Management
- Cyber Security
- Cloud Computing
- Data Science
- Text Analytics
- Quantitative Analysis
- Predictive Modelling
- Team Leadership

PROFESSIONAL EXPERIENCE

IBM Research Australia – Melbourne, AU

Research Scientist – Cognitive Analytics, 2016 - Present

Lead and oversee research operations of five researchers from three teams with expertise in R, Python, Spark, and React. Utilise text mining and machine learning to research and understand patents. Design, undertake, and analyse information from statistical data, experiments, and trials and deliver feasible demos, while leading a team of researcher and two software engineers.

Key Contributions:

- Earned an Outstanding Technical Achievement Award (OTAA) for exceptional work on Deep Learning Representations for Documents.
- Designed machine learning and Chatbot pipeline proof-of-concept for financial services clients.
- Filed three patents and three research papers under review.

IBM Research Australia – Melbourne, AU

Postdoctoral Research Scientist – Cognitive Analytics, 2016- 2018

Analysed large volumes of data to identify and mitigate issues in research assets of Watson Education. Delivered technical services to Watson Education to meet production needs of high prediction scores, parallelization, and micro-service APIs.

Key Contributions:

- Developed and delivered three machine-learning solutions for Watson Education.
- Designed and implemented document-chunking method for IBM, making it a core feature of an IBM offer.
- Filed two patents and published two research papers.

Australian Federal Government – Melbourne, AU

Data Scientist, 2015 - 2016

Devised modelling, profiling, and text analytics solutions for analysts by utilising R and SQL. Developed various machine learning-based tools and processes within company. Executed operations associated with collecting, cleaning, transforming, and interpreting data.

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Key Contributions:

- Developed and delivered dozens of profiling scripts to detect potentially unlawful activities.
- Explored automated and scalable entity extraction and entity matching techniques for text data.

Australian National University – Canberra, AU

Research Assistant and Co-founder Cybercrime Observatory, 2013 - 2015.

Steered machine learning research processes aimed at programming computers to detect malicious contents. Assisted with research procedures, such as designing, administering, and monitoring trials and experiments, as well as other related administrative tasks. Analysed and evaluated data gathered during research.

Key Contributions:

- Co-founded ANU Cybercrime Observatory to identify and monitor data trends collected from internet through government and industry partners.
- Designed and developed malicious content detection methods for 12 million spam emails from three companies.
- Featured in trends and issues of Australian Institute of Criminology for exceptional work.

Australian National University – Canberra, AU

Research Assistant, 2011 - 2015

Assisted with research projects in computer science and engineering. Supported Research Associates in writing and editing internal project documentation. Prepared findings for publication, while supporting research associates in data collection, evaluation, and management.

Key Contributions:

- Published three academic publications, including one in WWW Conference.
- Developed Facebook app for six-month long user study consisting of over 200 participants interacting with 37K friends.
- Devised synthetic data generation user interface for research project, resulting in an intuitive interface to research software.
- Part of a research team that earned Google Research Awards grant worth $70K.

EDUCATION AND CREDENTIALS

Doctor of Philosophy in Engineering and Computer Science

Thesis: Detecting Vandalism on Wikipedia across Multiple Languages

Australian National University, Canberra, AU

Bachelor of Computer Science – First Class Honours

Australian National University, Canberra, AU

PUBLICATION METRICS

Google Scholar Profile: https://scholar.google.com.au/citations?user=ihFcT5QAAAAJ&hl=en

Jun 7, 2019 | all citations: 289 | h-index: 8 | i10-index: 8

Notable publication venues: TKDE, PAKDD, CIKM, WWW, IJCNLP