Job Title: Engineer, Artificial Intelligence (Industrial Postgraduate Programme)

Department / Section: Digital Service

Location: Singapore

TÜV SÜD is an international service corporation and a world leader in consulting, testing, certification, and training. Headquartered in Munich, Germany, TÜV SÜD, employs more than 24,000 professionals across 1,000 offices in more than 50 countries around the globe.

In line with Singapore’s Smart Nation initiative, TÜV SÜD setup a global Center of Excellence (CoE) Digital Service in Singapore to drive the development of new services and businesses in our customers’ sectors and future markets.

For our strategic development of services involving artificial intelligence we are looking for a highly skilled machine learning and deep learning practitioner. The successful candidate will lead implementation efforts of new set of tools to assess the quality of product, process and data involving artificial intelligence. We offer the unique opportunity to work with world leaders at the forefront of smart digital systems, shaping the way how people can rely on technology. We are working with regulators and leading standardization organizations to make sure artificial intelligence is safe, secure, and reliable. The team of the CoE embodies the spirit of a dynamic ‘start-up’ environment but backed with reliability and strength of an MNC.

Industrial Postgraduate Programme (IPP)

The IPP is an initiative by the Singapore Economic Development Board to develop graduate research talent by partnering Singapore-based companies and universities, as well as selected Singapore-based foreign universities.

An IPP trainee will be enrolled in PhD level study, and spend time working on an industry project in an eligible company. This programme is open to Singaporeans and Singapore Permanent Residents and the duration is 4 years leading to an award of PhD by the university.

Position Summary

The successful candidate will take a key role in the research and development of novel tools and services under the strategic thrust of ‘Verification and Validation of AI’ in various industry sectors. The candidate will work in the development of new services, implementation of respective projects and will potentially take over the role of the product manager. He/she will join an agile team of international experts in the field of Industry 4.0, smart lift, autonomous vehicles, and smart healthcare.

Research Problem

Products and services that rely on artificial intelligence technology can currently not be tested with existing methods to assess safety, security, reliability, and conformance to legal and ethical requirements. Hence a new methodology is required to guide and continually assess the quality of AI
throughout all stages of the life cycle. A crucial component of such methodology is the selection and quantification of quality metrics, as well as defining conditions of acceptability in relation to the scope of the AI product. This research aims to define an objective and transparent quality assessment framework that overcomes the uncertainties that currently prevent the adoption of AI in mission critical applications.

Key Responsibilities

- Development of methodologies and algorithms for the verification and validation of AI-based products by focusing on quantifiable quality metrics throughout the entire product life cycle
- Verification and validation of AI data throughout the product life cycle
- Design and implementation of audit processes
- Interfacing with machine learning and statistical analytics backends
- Development of quality management systems to evaluate AI-based products, judge conformance to requirements, and provide conformity recommendations
- Service development and project implementation
- Project representative (software) for TÜV SÜD to liaise with external stakeholders

Key Requirements

- Degree in Computer Science, Electrical Engineering, or comparable with a focus on software design, implementation and testing
- Fundamental knowledge on AI including machine learning, data analytics, deep learning to act as “AI Generalist”
- Mathematical background in algorithms and statistics
- Quality management systems know-how
- 3 to 5 years of work experience in industry or academia in commercial projects developing software relevant to data analytics and machine learning
- Experience with a range of compiled and interpreted programming languages and software engineering support tools
- Demonstrated skills in analytical and architectural design thinking and testing
- Team player with ability to work in international and multi-cultural teams
- Strong communications skills, fluent in English (oral and written)
- Ability to represent the company and discuss with external stakeholders
- Highly motivated to tackle challenging problem descriptions

Interested candidates, kindly email your CV to Recruit.HR@tuv-sud-psb.sg by 30 October 2020.