




Chieh-Jen Wang

(王界人)

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Career Objective	Seeking a Senior Software Engineer or Project Leader role in Artificial Intelligence (AI) and Natural Language Processing (NLP) to enhance engineering productivity in the semiconductor and smart manufacturing industries.	
Education	National Taiwan University <i>Ph.D. in Computer Science and Information Engineering , June 2013</i> <ul style="list-style-type: none">GPA: 4.07/4.3	
Work Experience	Industrial Technology Research Institute (ITRI) <i>Technical Deputy Manager/Senior Engineer, July 2013-present</i> <ul style="list-style-type: none">Over 10 years of data analysis experience in semiconductor industryCoordinated and integrated cross-unit cooperation projects, including the division of labor for technical modules and the integration of R&D resourcesSecured funds more than 35 million from government or industry projectsAssisted manufacturers in securing over \$50 million in government grants	
Core Competencies	Intelligent Manufacturing (IM) <ul style="list-style-type: none">Prognostics and Health Management (PHM), Root Cause Analysis & Tracking, Operation Instruction Optimization, Knowledge Discovery & Management Large Language Models (LLM) <ul style="list-style-type: none">Retrieval-Augmented Generation (RAG), Natural Language Generation (NLG), Natural Language Processing (NLP), Summarization	
Projects	Prognostics and Health Management (PHM) <ul style="list-style-type: none">Predicted failures and remaining useful life for semiconductor equipment/components up to 48 hours in advanceCollected and analyzed factory and sensor dataResearched and implemented multi-level ensemble learning techniques integrating advanced machine learning algorithms with domain knowledgeAchieved accuracy higher than 95% with a false alarm rate below 1%Use case: Winbond PHM system(https://tinyurl.com/ye994bgj) Industry Knowledge Large Language Model <ul style="list-style-type: none">Discovered relevant knowledge from structured and unstructured dataExtracted causal relations to establish a knowledge graph for semiconductor problemsResearched and implemented a RAG-based model for knowledge discoveryAchieved a knowledge discovery precision rate higher than 93% and a relation extraction accuracy rate higher than 90%, representing a 54.2% improvement over the original KMSUse case: Winbond KMS system	
Additional Skills	<ul style="list-style-type: none">Deep Learning Frameworks: PyTorch, TensorFlow, KerasSoftware Development: Version control (Git, Bitbucket), Continuous Integration (Jira), Software Quality (SonarQube)Programming Languages: Python, Java, C++, SQL	
Patients	<ul style="list-style-type: none">Interactive Recommendation System and MethodDrug-Screening System and Drug-Screening MethodGraph-Based Natural Language Optimization System and MethodSelf Propelled Vehicle for Following Target and Method Thereof	<ul style="list-style-type: none">US, TWUS, TW, CNUS, TW, CNTW, CN