Xin Wang

PhD on Robotics and Computer Vision wangxin0913@gmail.com

Profile Summary

With **15 years expertise in AI** and a strong passion for technology, I offer a unique blend of strengths to any organization, including an **innovative mindset, fast-learning capability**, **strategic thinking**, a proven track record of **embedding AI in core business** and **driving successful deliverables**, the ability to **inspire and empower** others, and the skill to **build and lead** high-performing teams.

08/2021 until now (Senior) Computer Vision Manager, Royal Dutch Shell, the Netherlands

- Led the team in successfully **commercializing** our innovation solutions, including a recent **$4M** agreement.
- Led the **Gen AI Computer Vision program**, delivering impactful projects across business units including image generation for branding and marketing. Championed adoption of cutting-edge AI technologies such as LLMs, VLM, AI agents (langchain, Autogen), and vision models (GroundingDINO and more).
- Managed a team of over 15 professionals and influenced a broader natural team of more than 200 individuals, contributing to the delivery of substantial business value exceeding **$537 million.**
- Designed and implemented a **Computer Vision strategy** aligned with scaling-up goals, fostering a collaborative **AI ecosystem**. A product developed with a vendor achieved wide-scale adoption within Shell and was recognized by the EVP as a significant digital milestone.
- Guided a team of experts in implementing an **end-to-end Computer Vision pipeline** on Azure, accelerating Computer Vision product development and deployment.
- Led the team to **develop and deploy** multiple products, including integrity issue detection, operation automation using robotics, safety incidents detection, emission detection, 3D asset modeling, CV for renewables and digital twin, and genAI.
- Delivered over 50 impactful internal and external communications, presented three times on Computer Vision projects to CEO of Shell, and participated as a speaker at the AI Summit and Nvidia GTC.

Developed skills: Talent Recruitment, Senior Stakeholders Management, Team Management, Strategy Development, Coaching and Mentoring, Deep Learning and Computer Vision (classification, detection, segmentation), Stable Diffusion, NeRFs, SAM, LLMs, VLMs, AI agents, AI studio and other gen AI technologies.

07/2018 - 08/2021 AI Team Lead in Emerging Digital Tech, Royal Dutch Shell, the Netherlands

- Formed and led AI team from scratch and delivered >**30 Proof of Concepts** and **>5 service developments.**
- Efficiently navigated shell business to raise funding **> $2M** and delivered business value > **$80M.**
- As a project lead and AI specialist, led multiple Computer Vision, NLP, and ML projects using state-of-the-art technologies, including autoML for predictive maintenance and text classification using BERT Transformer.

Developed skills: Talent Recruitment, Leadership, Opportunity Framing, Natural Language Processing, Azure Cognitive Service, AzureML Pipeline, Blob Storage, Transformer with Bert, OCR, Form Recognizer, AutoML, Dev/Ops.

02/2017- 07/2018 Computer Vision Team Lead in Data Science CoE, Royal Dutch Shell, the Netherlands

- Built and led Computer Vision Team and developed Computer Vision theme.
- As a project lead and Computer Vision specialist, delivered HSSE video analytics project to achieve **$800K** business value. Microsoft CEO showcased this project in Microsoft Ignite 2018 keynote speech.
- Delivered Digital Watchman Machine Learning project and helped business to automate the end-to-end process using Alteryx workflow.
- Organized Computer Vision Hackathon with 29 teams and more than 150 people participating.

Developed skills: Team Building and Leading, Opportunity Framing, Project Management, Stakeholders Management, Deep Learning, Edge and Embedded Vision system, Python, R, Alteryx, Spark, Jupyter Notebook, Anaconda, Scikit-learn, Machine Learning.

09/2015- 02/2017 Business Analyst in Technical and Competitive IT, Royal Dutch Shell, the Netherlands

- ➢ Gathered business requirements and use cases from business stakeholders for several projects.
- ➢ Used various BI tools – PowerBI, Spotfire, Coresight, Processbook to create visualization displays for two projects.
- ➢ Delivered Bitumen Image Processing project using MATLAB.

Developed skills: Business Analysis skills, BI tools (Power BI, Spotfire), PI Real-time apps, Image Processing, MATLAB.

09/2014 – 06/2015 Researcher in Computer Vision, Allseas Group S.A., the Netherlands

- ➢ Designed and implemented algorithms for automatic pipes picking system with 3D reconstruction from 4 cameras. Researched and implemented algorithms for rope monitor system using multiple cameras around rope to inspect the quality of ropes.

Developed skills: Camera Calibration, 3D reconstruction; Control System, Halcon Computer Vision software, Computer Vision, Automated Inspection.

09/2009 – 09/2014 PhD researcher on Robotics and Computer Vision, Delft University of Technology, the Netherlands

- ➢ Designed an active vision system with 4 degrees of freedom and a real-time controller to achieve similar performance as human eye movements.
- ➢ Proposed and implemented a multi-mode 3D perception method based on stereo vision.
- ➢ Proposed and implemented an online object segmentation algorithm combining texture and color information.

Developed skills: MATLAB for modeling and simulation, C++/Mex for real-time implementation, Computer Vision including Motion and Object Detection, Camera Calibration, Structure from Motion, 3D Perception, Pattern Recognition, OpenCV, Control Theory, Linear Algebra, Probability and Statistics, Optimization, Augmented Reality tools, Point Cloud Library for Visualization, ROS.

Education

2009–2014 PhD Research in Robotics and Computer Vision, Delft Biorobotics Lab, Delft University of Technology, the Netherlands. (Graduation time: September 2015)

2005–2009 M.Sc. in Signal and Information Processing, Department of Signal and Information Processing, Northwestern Polytechnical University, China. (Average: 87/100, top 10%)

2001–2005 B.Sc. in Electronic and Information Engineering, Department of Electronic and Information, Northwestern Polytechnical University, China. (Average: 82/100, top 10%)

Certificates

Deep Learning Specialization Course on Coursera, Effective Communication Course, AI for Good course on Coursera (on-going), Deep Generative AI Models (on-going)

Activities & Awards

- ➢ Created a new way of innovation – Led the team to deliver 10 innovative prototypes during Computer Vision Co-Innovation Week.
- ➢ Many Shell internal awards including VP, EVP, CEO awards and organization awards. Won several Computer Vision Hackathons including a deep learning-based tag recognition algorithm on HoloLens (AR application) for offshore rigs.
- ➢ Member of World Robocup organization committee: Organized 2015 - 2019 world Robocup Junior Competition; Organized World Robocup Junior Competition 2013 in the Netherlands as a local chair with 2661 participants from 45 countries.
- ➢ Designed and delivered more than 10 STEM courses; Designed and gave Lego robot courses to young female school students.
- ➢ Extensive coaching and supervision experiences: Coached interns and other team members to deliver AI projects in Shell. Supervised bachelors end project “Security surveillance using a mobile robot” and supervised a master student with topic “Augmented Reality in dynamic scenes”; Gave master students “3D Robot Vision” courses and “Image Processing using MATLAB” practicum courses since 2010; Coached Minor Robotics students 6-month graduation projects to make an elephant robot and a table cleaning robot.

Language Skills

Chinese: Mother tongue; **English:** Fluently spoken and written; **French:** Daily conversation; **Dutch:** Daily conversation (Inburgeringsexamen passed)