

WHY STUDY THE ADVANCED INDUSTRIAL AI PATHWAY AT XEC.
为什么选择西浦创业家学院（太仓）人工智能行业前沿方向？

Advanced AI Technologies and Industry Applications

Students will master AI technologies such as deep learning, computer vision, natural language processing, and apply cutting-edge technologies such as generative AI and large language models, solving real-world industry problems and enhancing their future employability.

AI+

AIAC collaborates closely with other XEC schools, using research lab resources to provide diverse AI courses in robotics, healthcare, fintech, autonomous driving, gaming, etc. Students will engage in interdisciplinary projects to gain hands-on experience.

Syntegrative Education Model and Project-based Learning

The curriculum integrates teaching with practical AI projects and industry practices. It uses a student-centred, project-based approach to cultivate students' ability to solve real-world problems. Module assessments are primarily based on group assignments and individual projects.

Practical Learning and Entrepreneurial Empowerment

Specialized AI ENT modules are offered, leveraging resources such as the Innovation Factory and X3 Co-Venture to help students transform their ideas into reality. Through hands-on experience and entrepreneurial support, students' innovative potential is cultivated.

Professional Development Programme (PDP)

The PDP includes Syntegrative Project, X3 Co-Venture, Innovation Factory, Internships, Summer Undergraduate Research Fellowship (SURF), XJTLU Global Entrepreneurial Dream-Chasers, Summer Bootcamp/Summer School. Upon completing accumulative 600 hours, students will receive a certificate from both XJTLU and the UoL.

AI前沿技术与行业应用

学生将掌握深度学习、计算机视觉、自然语言处理等扎实的AI专业知识，精通生成式AI、大语言模型等前沿技术的应用，具备解决行业实际问题的能力，显著提升未来就业竞争力。

人工智能+

AIAC学院与XEC各行业学院紧密合作，充分利用科研实验资源，开展跨学科AI选修课，涵盖机器人技术、智慧医疗、金融科技、无人驾驶、游戏等领域，助力个性化发展需求，并积累各领域AI创新的实操经验。

融合式教育模式与项目式学习

教学与实践紧密结合，提供人工智能行业前沿项目和相关实践机会，培养学生解决实际问题的能力。课程考核主要通过小组作业和个人项目等形式，减少传统考试比重。

实践学习与创业赋能

提供定制化的AI创新创业课程，利用创新工场与浦创汇等资源，帮助学生将创意转化为现实。通过实践操作和创业支持，激发学生的创新能力，助力学生实现职业梦想。

行业发展训练营

涵盖600小时的融合式项目、创业孵化（浦创汇）、创新工场、实习项目、暑期科研项目SURF，西浦全球创业梦想家大赛等多个实践项目。进一步提升个人实践能力和市场竞争力。

START DATE: Sep 2025

2 + 1+1 Study: Available

Duration: Three or four years

Location: Taicang, Suzhou

School: School of AI and Advanced Computing

Attendance: Full Time

Qualifications XJTLU: BEng Artificial Intelligence

Qualifications UoL: BEng (Hons) Artificial Intelligence
(Advanced Industrial Artificial Intelligence)

BENG ARTIFICIAL INTELLIGENCE
(Advanced Industrial Artificial Intelligence)

人工智能（行业前沿）

The BEng Artificial Intelligence (Advanced Industrial Artificial Intelligence) programme at XJTLU is designed to equip students with a solid foundation in AI and cutting-edge technical expertise, with a strong emphasis on the real-world applications of AI in sectors such as technology, healthcare, finance, and manufacturing. By integrating theoretical knowledge with hands-on project experience, the programme enhances students' problem-solving abilities and industry readiness.

Graduates will possess advanced technical skills, practical project experience, and strong innovative thinking, enabling them to pursue diverse career paths in the AI field and stand out in the rapidly evolving AI industry.

西交利物浦大学人工智能（行业前沿）专业致力于培养具备坚实的AI专业基础和前沿技术能力的人才，重点关注人工智能在科技、医疗、金融、制造等多个行业中的实际应用。该专业融合理论学习与项目实践，提升学生解决复杂问题的能力与行业适应力。

毕业生将具备先进的技术水平、丰富的项目经验和卓越的创新意识，能够胜任人工智能领域多样化的职业发展路径，在快速演进的AI行业中脱颖而出。



SCHOOL OF AI AND ADVANCED COMPUTING

人工智能与先进计算学院

**BENG ARTIFICIAL
INTELLIGENCE
(ADVANCED INDUSTRIAL
ARTIFICIAL
INTELLIGENCE)**

人工智能专业：行业前沿

	Math	Computer Science	Artificial Intelligence	AI applications (Mostly interdisciplinary Optional Modules)
Year 1	Calculus			
	Multivariable Calculus			
	Linear Algebra			
	Introduction to AI			
Year 2	Mathematics for AI and Data Science	Object-Oriented Programming	Python for AI	AI Ideation and Strategy
		Computer Architecture and Operating Systems		Fundamentals and Perspectives for AI and Big Data Industry
		Data Modelling Techniques		Strategic Intelligence (Optional)
		Data Structure and Algorithms		
		AI Software Engineering (Optional)		
		Intelligent User Interaction (Optional)		
Year 3	Optimisation (Optional)	Networking and Distributed Computing (Optional)	Machine Learning	AI Startup Development Lab
			Signal and Image Processing	Multi-Agent Systems (Optional)
			Deep Learning	AI in Autonomous Vehicles (Optional)
			Pattern Recognition and Computer Vision	AI in Healthcare and Biomedical Engineering (Optional)
			Data Analytics and Visualisation	AI in XR, Gaming and Entertainment Industry (Optional)
				AI for multimodal data (Optional)
				Industry Readiness (Optional)
Year 4			Natural Language Processing	AI Venture Capstone
			Privacy, Security & Ethics	15 Industry-themed AI optional modules supported by schools in TC, i.e., .IoT for Smart Industry .Generative AI into Robotics .Digital Supply Chain .Interactive Technology .Intelligent Manufacturing Information system (Haier) .IC Technology and Engineering .China: International Trade Etc.
			Generative AI	
			Final Year Project	

	数学	计算机科学	人工智能	人工智能应用 (多数为跨学科选修课)
大一	微积分			
	多元微积分			
	线性代数			
	人工智能导论			
大二	人工智能与数据科学 数学基础	面向对象编程	Python 在人工智能中的应用	人工智能项目构思与策略
		计算机架构与操作系统		人工智能和大数据行业的技术基础和视角
		数据模型技术		战略智慧(选修)
		算法设计与分析		
		智能软件工程(选修)		
		智能交互技术(选修)		
大三	最优化方法(选修)	分布式计算与网络(选修)	机器学习	人工智能创业实验室
			信号与图像处理	多智能体系统(选修)
			深度学习	人工智能：自动驾驶(选修)
			模式识别与计算机视觉	人工智能：健康与生物信息工程(选修)
			数据分析与可视化	AI在扩展现实，游戏与娱乐产业中的应用(选修)
				多模态人工智能(选修)
				行业技能准备(选修)
大四			自然语言处理	人工智能创新创业毕业项目
			安全、隐私和道德	15门由太仓各学院支持的行业主题AI选修课，例如： .智慧工业物联网 .生成式人工智能在机器人中的应用 .数字供应链 .互动技术 .智能制造信息系统（海尔） .集成电路技术与工程 .中国：国际贸易 等等
			生成式人工智能	
			毕业设计	

KNOWLEDGE AND SKILLS

知识与技能

Solid expertise in programming, machine learning, deep learning, natural language processing, and computer vision.

Experience in applying AI technologies to solve complex problems in fields such as robotics, healthcare, finance, etc.

Practical experience through Syntegrative Projects, internships, summer research projects, and final-year projects, bridging theory with practice.

Strong communication, teamwork, leadership, and entrepreneurial skills to enhance employability.

扎实的编程、机器学习、深度学习、自然语言处理和计算机视觉等专业知识。

应用AI技术解决相关领域复杂问题的经验，如机器人、医疗、金融等。

通过融合式项目、实习、暑期科研项目和毕业项目获得实践经验，将理论与实践相结合。

拥有良好的沟通能力，团队协作能力，领导力，创新创业思维，以及就业能力。

FURTHER EDUCATION AND EMPLOYMENT

升学与就业

The demand for AI professionals is growing exponentially, offering numerous opportunities across various sectors. Graduates of the BEng AI programme will have a wide range of career paths, with strong competencies and broad prospects in both technology and other industries.

Graduates will be well-equipped for key roles such as AI Engineers, Machine Learning Engineers, and Robotics Engineers. These roles extend beyond tech, impacting sectors like healthcare, finance, manufacturing, and agriculture, where AI is transforming diagnostics, personalized medicine, farming, fraud detection, and automation. AI professionals are shaping the future of industries, driving innovation and enhancing operational efficiency.

Graduates also have the potential to become entrepreneurs or hold leadership roles in public institutions, applying AI to improve public services and policy-making.

For those pursuing advanced studies, the programme provides a strong foundation for Master's or PhD opportunities at leading global universities, specializing in AI applications and interdisciplinary fields.

随着AI专业人才需求的迅猛增长，毕业生将拥有广泛的职业发展机会，并具备强大的专业能力和跨行业的竞争力。

毕业生不仅能够胜任AI工程师、机器学习工程师、机器人技术工程师等职位，还能就职于医疗、金融、制造、农业等领域，推动诊断、个性化医疗、精准农业、欺诈检测、自动化等方面的创新。AI相关职业正逐步改变各行各业，推动效率提升，加速技术革新。

此外，毕业生还具备在公共机构中担任领导职务的能力和成为企业家的能力，能够利用AI技术改善公共服务与政策决策。

对于有意深造的毕业生，本专业为其提供了坚实的基础，帮助他们申请全球顶尖大学的硕士或博士学位，专注于AI应用或跨学科研究领域。

