

Westlake University 2026 Summer Research Internship Open Positions

No.	School	Host Professor	Research Field	Internship Project	Number of Interns	Campus	Requirements
1	School of Engineering	Fajie YUAN	AI+Biolog	Training and Application of AI foundation models for Biological data.	Two	Yungu campus	computer science background is preferred.
2	School of Engineering	Xianda Gong	Atmospheric Science; Climate Change; Aerosol	(1) Atmospheric ice-nucleating particles measurement; (2) Global aerosol, cloud condensation nuclei measurement data analysis.	Two	Yungu campus	Geoscience, atmospheric science, environmental science
3	School of Engineering	Tao LIN	Optimization for Deep Learning; Collaborative Learning	(1) Collaborative agentic intelligence (2) Foundation of generative models (3) Optimization theory for Deep Learning	Two	Yungu campus	
4	School of Engineering	Xin YUAN	Computational imaging, computer vision	(1) Develop advanced algorithms and models for imaging inverse problems (denosing, super-resolution, compressive imaging, etc) (2) Build new computational imaging systems for medical photography, remote sensing, and intelligent industry	Two	Yungu campus	Major in optics, electronic engineering, or computer science
5	School of Engineering	Yefeng ZHENG	Medical artificial intelligence	Multi-modal large language models with applications in medicine	Two	Yungu campus	
6	School of Engineering	Shiyu ZHAO	Aerial manipulation robots; multi-robot systems	(1) Aerial Manipulation Robots: This direction focuses on the control, motion planning, and sensing methodologies for novel aerial manipulation robots—micro aerial vehicles (MAVs) integrated with dexterous robotic manipulators. (2) Multi-Robot Systems: This direction involves developing generalized task planning algorithms for multi-robot systems operating in open-world environments, which are characterized by multiple objectives, unforeseen situations, and frequent human-swarm interactions.	Two	Yungu campus	Applicants should have a background in robotics, automation, computer science, or related fields, possess a strong interest in robotics, understand fundamental robotics problems and approaches, and be enthusiastic about methods such as learning, control, and large models.
7	School of Engineering	Weicheng CUI	Application of Unified Complex System Theory to solve practical problems	(1) Fundamental concepts necessary for any complex systems (2) Minimal fundamental assumptions needed for a scientific theory for complex systems (3) How to help local government leader to solve the unemployment issues for any people who need jobs in the AI and robotics era (4) How to help the general secretary of United Nations to solve the sustainability issue of the earth	Two	Yungu campus	No specific professional background is required, but a genuine interest in complex systems theory or its applications is a must
8	School of Engineering	Yue ZHANG	Natural Language Processing; AI Scientist; LLM Reasoning RL	(1) Reinforcement Learning and Logical Reasoning for LLMs (2) AI Scientist	Two	Yungu campus	Background in LLM.
9	School of Engineering	Siyng PENG	Nanophotonics and materials engineering	Design of chiral materials for chiral light-matter interactions	Two	Yungu campus	
10	School of Engineering	Anpei CHEN	Computer Graphics, Computer Vision, and Spatial Intelligence	(1) 3D Gaussian Splatting for Panorama Image (2) Navigation Foundation Models	Two	Yungu campus	Familiar with 3D Vision or Graphics

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11	School of Engineering	Yandong WEN	Large Language Model, Vision Language Model	(1) vision language model for face analysis (2) large language model for code alignment (3) representation learning for recognition	Two	Yungu campus	computer science
12	School of Engineering	Kaicheng YU	Interdisciplinary field of artificial intelligence and autonomous driving, with in-depth research and practical experience particularly in 3D perception for autonomous driving, Automated Machine Learning (AutoML), data closed-loop systems, and generative world models.	(1) Agentllm-guided key traffic regulation scenario editing agent (2) Skeleton pose-guided pedestrian video generation	Two	Yungu campus	
13	School of Engineering	Zexin JIN	Organic functional materials	Synthesis of chiral organic materials	Two	Yungu campus	
14	School of Engineering	Qicheng Zhang	Integrated phononic circuits	(1) The 3D integration of acoustic/phononic devices (2) The miniaturized ultrasound equipment	Two	Yungu campus	
15	School of Engineering	Min QIU	nanophotonic frontiers and exploit their inside physical mechanisms and potential applications	(1) Micro/nano fabrication technologies and instrumentation (ice lithography, Femtosecond laser processing, optical microscopy, etc.). (2) Nanophotonic devices (meta-fibers, meta-DOEs, 2D semiconductors, perovskite photodetectors, etc). (3) Smart equipment for industrial applications (LED lighting, AR/VR displays, micro photoactuators, chip cooling, etc.)	Two	Yungu campus	
16	School of Engineering	Jiayang ZENG	Artificial Intelligence and Computational Biology	(1) Virtual Cell Construction and Biological Process Simulation (2) Genomic AI Modeling (3) Dynamic Structure Modeling of Proteins	Two	Yungu campus	Computer Science, Bioinformatics or related majors
17	School of Engineering	Ziqing LI	Multi-modality, Diffusion models, Zero-shot prediction learning, AI Virtual Cell (AIVC))	(1) Multi-modality modeling of AIVC: (2) Diffusion models of cell state; (3) Zero-shot learning of cell perturbation; (4) Multi-modal modeling of cell states.	Two	Yungu campus	Computer science and engineering, mathematics, physics
18	School of Engineering	Liang LEI	Phase change and porous media	(1) Geological hydrogen formation (2) Seawater freezing (3) Patterning in frozen ground	Two	Yungu campus	

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19	School of Engineering	William Shieh	Optical Communication and Sensing	(1) Optical Communication Device and System (2) Optical Sensing Device and System	Two	Yungu campus	Electronic Engineering, Physics, Optics background
20	School of Engineering	Qiwen ZHAN	Complex optical fields and their interactions with matter	(1) Complex spatiotemporal optical fields (2) Light matter interactions between complex spatiotemporal optical fields with micro/nano structures	Two	Yungu campus	Candidates with a background in physics, optics, materials science, or related fields will be given preference
21	School of Engineering	Xiangru HUANG	Active Reconstruction and Perception / World Model	(1) Active 3D reconstruction and understanding (we work on both algorithms and the deployment to robot arms). (2) Physically-based world model	Two	Yungu campus	Capable of coding in PyTorch, AI/Computer Science background is preferred.
22	School of Engineering	Haisong LIN	(1) Automated driving and manipulation of biological fluids and biosamples (2) Research, development, and integration of biosensors and biological reagents (3) Clinical correlation studies on non-invasive biological fluids and biomarkers.	(1) Automated driving and manipulation of biological fluids and biosamples (2) Research, development, and integration of biosensors and biological reagents (3) Clinical correlation studies on non-invasive biological fluids and biomarkers.	Two	Yungu campus	
23	School of Engineering	Ling LI	eco-hydrology, multi-scale multiphase porous media flow and transport processes with hydro-mechanical coupling, eco-environmental system modelling, environmental pollution and control, impact of major engineering projects on the environment and global changes.	Exploring the complexity of eco-hydrological systems under climate change	One	Yungu campus	
24	School of Engineering	Jianjun CHENG	Polymer Chemistry, Polypeptides, Nanomaterials and Nanomedicine, Drug Delivery, Cancer-Targeting Technology	(1) The preparation of gold nanoparticles of varying sizes functionalized with DBCO; (2) The preparation of polyglutamic acid of varying molecular weights functionalized with DBCO; (3) Synthesis of NCA co-polypeptides and study on their reactivity ratios; (4) Study of the antitumor activity of NCA co-polypeptides; (5) Controllable synthesis of multiblock β -sheet polypeptides; (6) Solution self-assembly of multiblock β -sheet polypeptides.	Two	Yungu campus	
25	School of Engineering	Yao YANG	Electron Microscopy	Simulation and reconstruction algorithms tests on electron microscopy.	Two	Yungu campus	background in electron microscopy or computer algorithms.

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26	School of Engineering	Sergio Torres	Computational physics	(1) Nonlinear Threshold Analysis of Dissolution Finger Instability in Porous Media (2) Calibration of Equivalent Parameters for Reactive Dissolution Model Using Direct Numerical Simulation	Two	Yungu campus	Geoscience, applied mathematics, mathematics, computer science and engineering, mechanics, physics, engineering thermophysics and other related majors.
27	School of Life Sciences	Peiguo YANG	Phase separation and biomolecular condensates	(1) Discovery of novel biomolecular condensates in virus–host interactions (2) Targeting stress granules in neurodegenerative disorders	Two	Yungu campus	
28	School of Life Sciences	Xiaoyi Li	Genome engineering and functional genomics	Novel gene editing technology development	One	Yunqi campus	Genetics and/or bioinformatics
29	School of Life Sciences	Xiaoming ZHOU	Protein low complexity domains in physiology and disease	Molecular basis of protein low complexity and intrinsically disordered domains that are involved in physiology, such as phase separation, and human disease, like neurodegeneration.	Two	Yunqi campus	
30	School of Life Sciences	Qi HU	Chemical Biology	Regulatory Mechanisms of Enzymes and Development of Small-Molecule Regulators	Two	Yunqi campus	
31	School of Life Sciences	Jia ZHENG	Molecular Evolution and Synthetic Biology	Molecular Evolution; Synthetic Biology	Two	Yungu campus	synthetic biology, molecular evolution, bioinformatics, computational modeling, and AI
32	School of Life Sciences	Hongyun TANG	Organelle quality control and degenerative diseases	Exploring the emerging field of organelle export, with an emphasis on the pathways, mechanisms, and physiological roles of mitochondrial extrusion.	Two	Yungu campus	
33	School of Life Sciences	Changliang LIU	Neuroscience	Functional Dissection of Striatal Computation	Two	Yungu campus	
34	School of Life Sciences	Ding LIU	Neuroscience of Loneliness and Social Need	(1) How are social need and loneliness encoded in the brain? (2) How do social and eating behaviors interact with each other? (3) How to use artificial intelligence (AI) agents to simulate biological social behaviors? (4) What are the neural mechanisms of motion sickness?	Two	Yungu campus	all natural sciences with basic programing skills
35	School of Life Sciences	Hongtao YU	Cell biology	Modeling neurodegenerative diseases with human brain organoids	Two	Yungu campus	
36	School of Life Sciences	Yigong SHI	(1) Structural and mechanistic investigation of Alzheimer's disease (2) Assembly, function, and regulation of macromolecular machineries.	(1) Exploring the natural protective mechanisms of Alzheimer's disease; (2) Exploring the molecular mechanisms of cotranscriptional splicing.	Two	Yunqi campus	
37	School of Life Sciences	KiryI Piatkevich	Spatial Biology	Validation and benchmarking AI agents for spatial biology	Two	Yunqi campus	dry lab
38	School of Life Sciences	Lianfeng WU	Metabolism and Aging	(1) Targeted Nutritional Strategies for Metabolic Disorders (2) Nutritional Determinants of Longevity and Healthspan	Two	Yungu campus	
39	School of Life Sciences	Lizhong LIU	Embryonic development and stem cells	Use stem cells to build in vitro models that mimic embryonic development	One	Yungu campus	
40	School of Medicine	Ren SUN	Systems virology and Immunomics	Precision Engineering of Broad-Spectrum Vaccines and High-throughput Immune Profiling	Two	Center for Infectious Disease Research	

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41	School of Medicine	Tiannan GUO	AI proteomics	spatiotemporal proteomics and AI virtual cell	Two	Yunqi campus	Ai-assisted programming skills required
42	School of Medicine	Zhaoqian WANG	In situ structural virology	(1) Cryo-Electron Tomography data annotation (2) Protein post-translational modification analysis of persistent infectious viruses	Two	Center for Infectious Disease Research	
43	School of Science	Rui SHANG	sustainable catalysis for organic synthesis and electronic materials	(1) Photocatalysis for organic synthesis (2) Iron catalysis for organic synthesis (3) Synthesis of organic electronic materials using sustainable catalysis methods	Two	Yungu campus	Completed the basic organic chemistry courses and possessing organic synthesis skills
44	School of Science	Zhichang LIU	Molecular Strain Engineering and the Study of Supramolecular Organic Functional Assemblies: Design, Construction, and Applications.	Molecular Strain Engineering	Two	Yungu campus	Organic Synthesis, Supramolecular Chemistry, Functional Organic Molecule Synthesis, Coordination Chemistry
45	School of Science	Shengchao LI	Experimental Particle Physics	Instrumentation of the noble-element time projection chambers and their data analysis	Two	Yungu campus	Physics, computer science
46	School of Science	Hongyu CHEN	Nanocomposite Synthesis Chemistry	Surface-Enhanced Raman Spectroscopy Study: Loading of dyes in silica nanoparticles	Two	Yungu campus	
47	School of Science	Chao TANG	Quantitative biology, Statistical physics of AI	(1) Virtual cell and virtual embryo (2) Modeling self-organization in morphogenesis (3) Scaling laws in LLM (4) Gene expression dynamics	Two	Yungu campus	
48	School of Science	Congjun WU	Physics	(1) Condensed Matter Physics (2) Cold atom physics (3) AI and Physics	Two	Yungu campus	
49	School of Science	Po-Yi HO	Quantitative biology and complex systems	(1) Mathematical modeling of functional selection in complex biological systems (2) Experimental evolution of human gut microbiomes	Two	Yungu campus	We welcome researchers from various scientific backgrounds, including but not limited to physics, systems and synthetic biology, computer science, etc.
50	School of Science	Leihan TANG	Statistical Physics and Complex Systems	(1) Statistical mechanics study of spin glass models (2) Learning dynamics of deep neural networks (3) Agent-based model exploration for epidemic control (4) Synchronization in nonlinear dynamics (5) Studying protein dynamics and conformational changes using molecular dynamics simulations	Two	Yungu campus	
51	School of Science	Haihua LU	Natural product synthesis.	Catalytic asymmetric synthesis of indole diterpenoid alkaloids.	Two	Yungu campus	
52	School of Science	Hongguang LIU	Quantum Gravity and QFT	Anharmonic oscillator, renormalization group and trans-series/resurgence	One	Yungu campus	familiar with quantum mechanics

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53	School of Science	Ruihua HE	MBE growth and ARPES study of quantum materials	(1) New superconductors, (2) Photocathode quantum materials.	Two	Yungu campus	Physics major
54	School of Science	Wenbin LIN	chemistry, materials, and cancer therapeutics	(1) Framework materials for sustainable catalysis (2) Framework materials for cancer therapy (3) Development of novel vaccines	Two	Yungu campus	chemistry and biology
55	School of Science	Naizhou WANG	Condensed matter physics	(1) Build up a switching matrix system aiming for low-noise DC measurement (2) Build up a confocal microscope setup with a Hong-Ou-Mandel inteferometer	Two	Yungu campus	Physics/Optics/Electrical Engineering