研究合作意向书

Letter of Intent for Research Collaboration

项目：基于脑机接口的测谎技术研究与开发
Project: BCI-Based Deception Detection Technology R&D;

本意向书由 AI Player in Gothenburg（Aika Lab，以下简称“ 甲方 ”）与有意参与本研究合作的大学或研究机构（以下简称“ 乙方 ”）签署，旨在就基于脑机接口（BCI）的测谎技术研究与开发建立合作框架。

This Letter of Intent is entered into by AI Player in Gothenburg (Aika Lab, "Party A") and the university or research institution intending to participate ("Party B"), to establish a cooperation framework for BCI-based deception detection technology research and development.

第一条 项目背景与目标

Article 一 Project Background & Objectives

传统测谎技术（如多道生理记录仪）主要依赖外周生理信号，存在准确率有限、易受反测谎策略干扰等不足。随着脑机接口技术的发展，直接从大脑神经活动中提取与欺骗行为相关的认知特征成为可能。Aika Lab 基于神经动力学研究，开发了一套通过 BCI
实时采集脑电信号并利用深度学习算法识别欺骗相关神经模式的技术方案。

Traditional deception detection technologies (such as polygraphs) rely primarily on peripheral physiological signals, with limitations including limited accuracy and vulnerability to countermeasure strategies. With advances in BCI technology, it has become possible to extract cognition features related to deceptive behavior directly from neural activity. Leveraging its neurodynamics research, Aika Lab has developed a technical solution that captures EEG signals in real time via BCI and employs deep learning algorithms to identify deception-related neural patterns.

本项目旨在：（1）建立基于脑电神经特征的欺骗检测算法模型；（2）通过多场景实验验证该模型的准确性、鲁棒性和泛化能力；（3）探索该技术在司法鉴定、安全审查等领域的应用可行性。

This project aims to: (1) establish a deception detection algorithm model based on EEG neural features; (2) validate the model's accuracy, robustness, and generalizability through multi-scenario experiments; (3) explore the feasibility of applying this technology in forensic identification, security screening, and related domains.

第二条 合作模式与各方职责

Article 二 Cooperation Model & Responsibilities

甲方（Aika Lab）职责：

Party A (Aika Lab) Responsibilities:

- 向乙方无偿提供加密的欺骗检测核心算法及技术文档，专用于本项目科研活动；
- 提供脑电信号处理与深度学习模型的技术支持；
- 协助设计多场景测谎实验范式（如犯罪知情测试 GKT/CIT、虚假陈述识别等）；
- 提供算法部署培训及持续技术支持与版本更新。

- Provide Party B, free of charge, with encrypted deception detection core algorithms and technical documentation exclusively for research under this project;
- Provide technical support for EEG signal processing and deep learning models;
- Assist in designing multi-scenario deception detection paradigms (e.g., Guilty Knowledge Test GKT/CIT, false statement identification, etc.);
- Provide algorithm deployment training, ongoing technical support, and version updates.

乙方（大学/研究机构）职责：

Party B (University/Research Institution) Responsibilities:

- 提供符合伦理要求的实验环境、BCI 设备及受试者招募；
- 负责申请伦理审查批准，确保实验设计符合人体实验伦理规范；
- 配备具有认知神经科学、心理学或相关学科资质的研究人员；
- 按照实验方案采集数据并定期提交进展报告。

- Provide experiment environments, BCI equipment, and participant recruitment in compliance with ethical requirements;
- Apply for ethical review approvals, ensuring experimental design complies with human subject research ethics;
- Assign qualified cognitive neuroscience, psychology, or related-discipline researchers;
- Collect data per protocols and submit periodic progress reports.

第三条 知识产权与成果归属

Article 三 Intellectual Property & Ownership of Results

- 甲方提供的欺骗检测核心算法的知识产权完全归甲方所有；
- 合作中产生的实验数据、检测模型及研究发现由双方共同享有；
- 衍生知识产权（如新的检测范式、改进模型）根据贡献比例协商归属；
- 学术发表须经双方书面同意；涉及算法架构及核心技术参数的内容须经甲方审核并批准。

- IP rights of the deception detection core algorithms provided by Party A shall remain exclusively with Party A;
- Experimental data, detection models, and research findings shall be jointly owned;
- Derivative IP (e.g., new detection paradigms, improved models) shall be allocated based on respective contributions;
- Academic publications require prior written consent; content involving algorithm architecture and core technical parameters must be reviewed and approved by Party A.

第四条 伦理、合规与使用限制

Article 四 Ethics, Compliance & Usage Restrictions

鉴于测谎技术的特殊敏感性，双方特别约定以下条款：

Given the particular sensitivity of deception detection technology, both parties specifically agree to the following:

- 所有研究活动须严格遵守国际及当地伦理规范和法律法规；
- 受试者须充分知情并自愿参与，不得以任何形式强迫参与测试；
- 研究成果仅限于学术研究及经双方书面同意的合法应用场景，严禁用于侵犯人权、非法监控或任何违反基本伦理原则的用途；
- 技术的商业化应用须经双方共同评估其法律合规性和社会伦理风险后方可推进；
- 受试者数据须匿名化处理并严格保密。

- All research activities must strictly comply with international and local ethical standards and legal regulations;
- Participants must be fully informed and participate voluntarily; no coercion of any form shall be used;
- Research outputs shall be limited to academic research and lawful applications jointly approved in writing; use for human rights violations, illegal surveillance, or any purpose contrary to fundamental ethical principles is strictly prohibited;
- Commercial application of the technology shall proceed only after joint assessment of legal compliance and social-ethical risks by both parties;
- Participant data must be anonymized and strictly confidential.

第五条 成果商业化

Article 五 Commercialization of Results

合作研究成果面向商业用户的转化（包括但不限于司法鉴定工具、安全审查系统的有偿转让或使用授权）由甲方主导推进，并须经双方共同评估合规性后方可实施。商业化收益分配在正式协议中约定。乙方在同等条件下享有优先合作权。

Commercialization of collaborative outputs (including but not limited to forensic tools, security screening systems, paid licensing or usage authorization) shall be led by Party A, subject to joint compliance assessment before implementation. Revenue distribution shall be stipulated in the formal agreement. Party B shall have right of first refusal under equivalent terms.

第六条 保密义务

Article 六 Confidentiality

双方对合作中接触的保密信息负有严格保密义务，保密期限为五（5）年，合作终止后仍然有效。涉及受试者个人信息的保密义务不受时间限制。涉及算法核心技术的保密义务不受时间限制。

Both parties shall maintain strict confidentiality for five (5) years, surviving termination. Confidentiality obligations regarding participant personal information and core algorithm technology shall be unlimited in duration.

第七条 合作期限与终止

Article 七 Term & Termination

本意向书有效期为两（2）年。双方应在签署后九十（90）日内完成正式协议的签署。任何一方可提前三十（30）日书面通知终止，已开展的研究及保密义务不受影响。如任何一方发现研究活动存在违反伦理或法律的情形，有权立即终止合作。

This LOI is valid for two (2) years. Both parties shall execute the formal agreement within ninety (90) days. Either party may terminate with thirty (30) days' written notice; ongoing research and confidentiality obligations remain unaffected. If either party discovers ethical or legal violations in research activities, it shall have the right to terminate immediately.

第八条 法律性质与适用法律

Article 八 Legal Nature & Governing Law

本意向书除保密、伦理及合规条款外不构成法律约束力合同。适用瑞典王国法律，争议提交哥德堡有管辖权的法院裁决。本意向书中英文版本同等效力，如有歧义以中文为准。一式四份，双方各执两份。

This LOI does not constitute a legally binding contract except for confidentiality, ethics, and compliance provisions. Governed by the laws of the Kingdom of Sweden; disputes shall be submitted to the competent court in Gothenburg. Both language versions have equal validity; Chinese prevails in case of discrepancy. Executed in four counterparts, two for each party.

甲方 / Party A（Aika Lab）	乙方 / Party B
机构名称 / Institution: AI Player in Gothenburg (Aika Lab)	机构名称 / Institution: _____
授权代表 / Authorized Rep.: _____	授权代表 / Authorized Rep.: _____
签字 / Signature: _____	签字 / Signature: _____
日期 / Date: _____	日期 / Date: _____