ISSP Comp 3800 Burnaby Excel Catalogue (2026 Winter)

Project ID:
977

Company:
BCIT MRI Program

Project Areas:
empty

Company Profile:
The aim of the Magnetic Resonance Imaging (MRI) program is to prepare graduates with the knowledge, critical thinking and technical skills to safely perform high quality diagnostic MRI studies while maintaining a high level of care for the patient.

Project Description:
Ray collaborated with Computing students—alongside Vienna (coder/multimedia developer) and Jason (3D modeler)—to advance the development of a VR platform simulating an MRI department. To date, the team has built the virtual environment, including key components such as MRI coils, a power injector, and a patient avatar with limited movement capabilities. A new proposal is being submitted to support continued development, as this project was originally envisioned as a multi-term initiative. The next phase will focus on addressing a bug identified during recent QA testing, with key priorities including correcting pivot points, adjusting scale, and optimizing textures.

Programming Language(s):
Unknown at this time what students were using

Hardware/Software Requirements:
Headsets (supplied by SOHS Sim team) Software-students have been using Unity

Current Work/Arrangement:
Fall term 2024- Ray and Computing students worked together (along with Vienna, coder/multimedia developer; Jason, 3d modeler) to develop a VR platform to simulate an MRI department. Environment has been built so far (coils, 3D models for MRI/power injector), along with patient avatar (some movements).

Previous Project?:
yes

ISSP 第3800号 布朗比 Excel 目录（2026年冬季）

项目编号：
977

公司：
BCIT MRI 项目

项目领域：
empty

公司简介：
磁共振成像（MRI）项目的目标是培养具备专业知识、批判性思维和技术能力的毕业生，能够安全地进行高质量的诊断性MRI检查，同时为患者提供高水平的护理。

项目描述：
Ray 与计算机专业的学生——包括维也纳（程序员/多媒体开发者）和杰森（3D建模师）——合作，推进
虚拟现实平台的开发，该平台模拟一个MRI科室。迄今为止，团队已经构建了虚拟环境，包括关键
组件，例如MRI线圈、动力注射器以及具有有限活动能力的患者虚拟形象。目前正提出一项新的方案，以
已提交以支持项目的持续开发，因为该项目最初被设想为一个跨多个学期的长期计划。下一阶段将专注于解决近期质量保证测试中发现的一个漏洞，主要任务包括修正旋转轴心点、调整比例以及优化纹理。

编程语言：
目前尚不清楚学生使用的是什么编程语言

硬件/软件要求：
头戴式设备（由SOHS模拟团队提供），软件——学生一直在使用Unity

当前工作/安排：
2024年秋季学期——Ray和Computing的学生与Vienna（程序员/多媒体开发人员）以及Jason（3D建模师）合作，共同开发了一个用于模拟MRI科室的VR平台。目前已完成环境搭建（线圈、MRI设备/高压注射器的3D模型）以及患者虚拟形象（具备部分动作）。

之前的项目？：
yes

Project ID:
1023

Company:
Gigsup AI

Project Areas:
empty

Company Profile:
Gigsup is an innovative platform designed to help youth navigate career paths through transparent insights on jobs including pathways, education, ROI, demand, skills, and other real-world data (including, pay, stress, demographics and more). Our platform will empower users to make informed career choices by delivering data-driven insights with minimal cost. We're seeking a tech-savvy BCIT student with a passion for developing impactful solutions to help us build our MVP!

Project Description:
Gigsup is a tech-driven platform that helps youth explore career paths through transparent, real-world data; everything from job demand, required skills, and pay, to ROI on education, stress levels, and workforce demographics. We're currently enhancing our MVP and looking for a BCIT student who's passionate about using technology to make an impact. Our MVP matches users (based on resumes, LinkedIn, and survey data) to job profiles aligned with their unique strengths. We now want to level up: • Build an open profile network with search, mentor/mentee assignment, and interaction capabilities • Scrape job postings and datasets to match users with real, live opportunities • Strengthen our backend to support a scalable LLM that connects skills to career pathways, and then to education and job opportunities If you're excited to build meaningful tech that solves a real problem, we'd love to hear from you.

Programming Language(s):
Python / Llama

Hardware/Software Requirements:
Cloud Platforms TBD, Data Storage TBD, NLP Library TBD, Data & Analysis TBD

Current Work/Arrangement:
Career Assessment: The initial assessment model has been developed to provide career recommendations. Plans are underway to refine this model by incorporating psychometric and skill-based evaluation metrics to enhance personalization. User Profiles: Structured user profiles are being designed to capture individual skills, experiences, preferences, and career aspirations. The goal is to implement AI-driven insights that suggest potential career transitions and skill development pathways. Career Pathway Recommendations: The LLM is being trained to map CV content to relevant career paths and educational opportunities. Efforts are focused on providing dynamic recommendations based on real-time job market trends and integrating alternative career paths, including entrepreneurship and freelance opportunities. Job & Education Links Integration: Work is in progress to connect career pathways with real-time job postings from industry partners and job boards. Additionally, the team is linking recommended pathways to relevant educational courses, certifications, and skill-building programs, providing direct application options and enrollment links for job and education opportunities. Data Architecture: The backend database is being optimized for scalability and seamless integration of new data sources. Measures are being implemented to ensure GDPR and privacy compliance in handling user data, along with feedback loops for continuous learning and refinement of recommendations. Next Steps: Conduct user testing on the initial LLM prototype to assess its effectiveness. Gather industry feedback to validate and refine career pathway recommendations. Develop a Minimum Viable Product (MVP) showcasing the AI-driven career guidance experience. Prepare for integration with external job and education databases.

Previous Project?:
yes

项目编号：
1023

公司：
Gigsup AI

项目领域：
empty

公司简介：
Gigsup 是一个创新平台，旨在通过提供有关职业路径、教育投入回报率、市场需求、技能要求以及现实世界数据（包括薪酬、压力水平、人口统计等）的透明信息，帮助年轻人规划职业发展。我们的平台将以极低的成本为用户提供数据驱动的洞察，助力其做出明智的职业选择。我们正在寻找一位精通技术且热衷于开发具有影响力解决方案的 BCIT 学生，协助我们构建 MVP！

项目描述：
Gigsup 是一个以技术为驱动的平台，通过透明且真实的现实数据，帮助年轻人探索职业发展路径；涵盖从职位需求、所需技能和薪酬，到教育投资回报率、工作压力水平以及劳动力人口统计等各个方面。我们目前正在完善 MVP 版本，寻找一位热衷于利用技术产生影响力的 BCIT 学生。我们的 MVP 能够根据用户的简历、LinkedIn 资料和调查数据，将用户与契合其独特优势的职位画像进行匹配。现在，我们希望更进一步：• 构建一个开放的个人资料网络，支持搜索、导师/学员配对及互动功能 • 抓取招聘信息和数据集，使用户能够匹配真实且实时的工作机会 • 强化后端系统，以支持可扩展的 LLM 模型，将技能连接至职业路径，再进一步连接至教育和就业机会。如果你热衷于开发能解决实际问题的有意义的技术，我们非常期待你的加入。

编程语言：
Python / Llama

硬件/软件要求：
云平台待定，数据存储待定，NLP 库待定，数据与分析待定

当前工作/安排：
职业评估：已开发出初步评估模型以提供职业推荐。目前正在计划通过引入心理测量和基于技能的评估指标来优化该模型，从而增强个性化体验。用户档案：正在设计结构化的用户档案，用于记录个人的技能、经验、偏好和职业抱负。目标是实现由人工智能驱动的洞察，以建议潜在的职业转型和技能发展路径。职业路径推荐：大型语言模型（LLM）正在被训练以将简历内容映射到相关的职业路径和教育机会。工作重点在于根据实时就业市场趋势提供动态推荐，并整合包括创业和自由职业在内的替代性职业路径。职位与教育链接整合：正在进行工作，将职业路径与来自行业合作伙伴和招聘网站的实时职位发布相连接。此外，团队还将推荐路径与相关的教育课程、认证以及技能提升项目进行关联，为求职和教育机会提供直接申请选项和注册链接。数据架构：后端数据库正在被优化，以支持可扩展性并无缝集成新的数据源。同时正在实施措施，确保在处理用户数据时符合GDPR和隐私合规要求，并建立反馈机制以持续学习和优化推荐结果。下一步计划：对初始LLM原型进行用户测试，评估其有效性；收集行业反馈以验证并优化职业路径推荐；开发一个展示AI驱动职业指导体验的最小可行产品（MVP）；准备与外部职位和教育数据库的集成。

先前的项目？：
yes

Project ID:
1058

Company:
iron52

Project Areas:
Web Development,Mobile Development

Company Profile:
We make mobile apps to help people improve their lives. Two people: one IT professional and one legal professional.

Project Description:
We are making a mobile app whose interface is like that of Tinder. It is not a dating app, but the experience is very similar to the look, feel, and behavior of tinder. The app will allow people to find "things to do" in their area, in their budget, on the days they are available.

Programming Language(s):
Firebase Swift and SwiftUI with XCode

Hardware/Software Requirements:
A Mac capable of running xcode.

Current Work/Arrangement:
We are just starting.

Previous Project?:
no

项目编号：
1058

公司：
iron52

项目领域：
Web开发,移动开发

公司简介：
我们开发移动应用程序，帮助人们改善生活。团队两人：一位IT专业人士和一位法律专业人士。

项目描述：
我们正在开发一款界面类似于 Tinder 的移动应用。它不是一款交友应用，但其外观、感觉和操作体验与 Tinder 非常相似。该应用将帮助用户根据所在地区、预算以及可安排的时间，找到适合的“可做的事情”。

编程语言：
Firebase Swift 和 SwiftUI 搭配 XCode

硬件/软件要求：
一台能够运行 Xcode 的 Mac 电脑。

当前工作/安排：
我们刚刚开始。

先前项目？：
no

Project ID:
1077

Company:
Cherry FLFM Inc.

Project Areas:
Mobile Development

Company Profile:
Cherry FLFM Inc. is a Vancouver-based startup founded by and for sapphics—queer women and non-binary people. Our mobile app, Cherry FLFM (Find Love, Friendship, and More), is designed to provide a safe, inclusive space for sapphics to build meaningful connections, whether romantic or platonic. While mainstream dating apps exist, they often fail to serve this community, exposing users to harassment, discrimination, or irrelevant matches. Cherry FLFM addresses these gaps through advanced filtering, robust safety features, and thoughtfully designed profiles that center queer users.

Project Description:
Students who select Cherry FLFM will gain hands-on experience maintaining and developing a live mobile app with active users. Cherry FLFM is a friendship and dating app built specifically for queer women and non-binary people, with a focus on safety, inclusion, and community. This project will involve maintaining and upgrading Version 1 of the app. Key tasks may include resolving bugs, improving performance, and optimizing the user experience. Students will also contribute to planning and developing new features for Version 2, including the introduction of paid memberships and premium community-focused features. Students will have the opportunity to: - Work on a real product that is actively launching - Apply and expand their Flutter, Firebase, and mobile development skills - Collaborate with a queer-led team deeply invested in ethical tech - Make a tangible impact in a community often underserved by dating and friendship apps The sponsor is actively involved, has technical support available, and is interested in building a long-term working relationship if the collaboration is successful. This is a meaningful opportunity to apply your skills to a real-world app that fosters connection and belonging in the queer community.

Programming Language(s):
The app was built using Flutter, but I am open to using any programming language as long as it is compatible with iOS and Android.

Hardware/Software Requirements:
Any hardware/software that is required to code a mobile app.

Current Work/Arrangement:
We hired a development team in India to build Version 1 of the Cherry FLFM. Cherry FLFM is available on the Apple and Google Play stores.

Previous Project?:
no

项目 ID：
1077

公司：
Cherry FLFM Inc.

项目领域：
移动开发

公司简介：
Cherry FLFM 公司是一家位于温哥华的初创企业，由女同性恋者（sapphics）——即酷儿女性和非二元性别者——创立，也服务于该群体。我们的移动应用 Cherry FLFM（寻找爱情、友谊及其他）旨在为女同性恋者提供一个安全、包容的空间，以建立有意义的联系，无论是浪漫关系还是纯友谊。尽管主流交友应用已经存在，但它们往往无法满足这一群体的需求，使用户面临骚扰、歧视或不相关的匹配。Cherry FLFM 通过高级筛选功能、强大的安全特性以及专为酷儿用户精心设计的个人资料，弥补了这些不足。

项目描述：
选择Cherry FLFM项目的学生将获得实际操作经验，参与维护和开发一款拥有活跃用户的真实移动应用。Cherry FLFM是一款专为酷儿女性和非二元性别者打造的交友与约会应用，注重安全、包容和社区建设。该项目将涉及对应用第一版的维护和升级，主要任务可能包括修复漏洞、提升性能以及优化用户体验。学生还将参与规划和开发第二版的新功能，例如引入付费会员制度以及以社区为核心的高级功能。学生将有机会：- 参与一个正在积极上线的真实产品 - 应用并拓展自身的Flutter、Firebase及移动端开发技能 - 与一个由酷儿主导、致力于伦理技术的团队协作 - 在长期被交友和社交应用忽视的群体中产生切实影响。项目赞助方将积极参与，提供技术支持，并希望在合作成功的基础上建立长期合作关系。这是一个宝贵的机会，让学生能够将自己的技能应用于促进酷儿社区联结与归属感的真实世界应用中。

编程语言：
该应用使用 Flutter 构建，但我愿意采用任何与 iOS 和 Android 兼容的编程语言。

硬件/软件要求：
开发移动应用所需的任何硬件/软件。

当前工作/安排：
我们聘请了位于印度的开发团队来构建Cherry FLFM的第一个版本。Cherry FLFM可在苹果和谷歌应用商店下载。

先前项目？：
no

Project ID:
1085

Company:
Soul Surfer Software by MTI

Project Areas:
empty

Company Profile:
We are a software startup specializing in small projects, community software and digital support work for BIA's (business improvement areas). Are history is eclectic as we started as a community restaurant 25 years ago in North Vancouver. Our community involvement led us to see technology needs at the community level. We have done a project with BCIT called TipShare. It is a tip distribution calculator and fintech solution. Currently 3 BCIT grads are working on the application, and we hope to go live very soon.

Project Description:
This project is a community mobile application and PWA (time permitting). We are working closely with the Central Lonsdale BIA (business improvement are) to develop a mobile first digital solution for their upcoming charter to represent and develop local businesses. The MVP is a business listing for each business in the hyperlocal area of their charter and up to 4 event listings that individual businesses could enter into the app through forms. These listings need basic functionality and filtering as well as way finding. As the app is partially developed already, the task would involve improving and completing the application and going through the App Store and Google Play protocols to first launch the beta version and second go live with the application. There also needs to be a PWA (progressive web app) configured so the task (time permitting) would be to assess and configure the UI/UX for different screen sizes. This MVP goal is a launchpad for more sophisticated modules such as hyperlocal delivery, hospitality reservations, peer to pier payments and more. This app is the first of its kind and aims to be eventually launched across Canada for all BIA's. There are currently more than 800 BIA's in Canada. This MVP is beta version with Central Lonsdale as our Beta group. You will work in React Native and Xano database. The social goals of the app are two fold: 1. It should provide small business technological tools to better compete with the large corporations that are dominating the business landscape and 2. Encourage local residents to choose and support their local merchants and businesses by providing those merchants with a technological advantage that they currently do not have.

Programming Language(s):
Draftbit is a no code and/or custom code platform. We suggest using the no code structure with custom coding when it suits your needs. Xano is a no code database. We have notes from previous teams to help with 'quick start'.

Hardware/Software Requirements:
DraftBit and Xano will be provided

Current Work/Arrangement:
This is described above. There is a current working copy of the app. It is basic but has both the database and frontend substantially completed.

Previous Project?:
no

项目 ID：
1085

公司：
MTI 出品的 Soul Surfer Software

项目领域：
empty

公司简介：
我们是一家软件初创公司，专注于小型项目、社区软件以及BIA（商业改善区）的数字支持工作。我们的历史颇为多元，25年前最初在北温哥华以一家社区餐厅起步。由于参与社区事务，我们逐渐意识到社区层面的技术需求。我们曾与BCIT合作开展了一个名为TipShare的项目，这是一个小费分配计算工具和金融科技解决方案。目前有3名BCIT毕业生正在开发该应用，我们希望很快就能上线。

项目描述：
本项目是一个社区移动应用程序以及PWA（视时间而定）。我们正与中朗斯代尔商业促进区（BIA）密切合作，为其即将推出的章程开发一种以移动端优先的数字解决方案，以代表并推动本地企业发展。该MVP包含在其章程所覆盖的超本地区域内每家企业的业务列表，以及最多4个活动列表，各企业可通过表单将活动信息录入应用。这些列表需要具备基本功能、筛选选项以及导航指引功能。由于该应用已部分开发完成，任务将包括改进和完善应用程序，并完成App Store和Google Play的相关流程，首先发布测试版本，然后正式上线。此外，还需要配置PWA（渐进式网页应用），因此该任务（视时间而定）还包括针对不同屏幕尺寸评估和配置UI/UX。此MVP目标是为更复杂的模块（如超本地配送、餐饮预订、点对点支付等）提供一个启动平台。该应用为同类中的首创，旨在未来推广至加拿大全国所有BIA。目前加拿大已有超过800个BIA。此MVP将以中朗斯代尔作为我们的测试组进行首发。您将使用React Native和Xano数据库进行开发。该应用的社会目标有两个：1. 为小企业提供技术工具，使其能够更好地与主导商业格局的大型企业竞争；2. 通过为商家提供目前尚未具备的技术优势，鼓励本地居民选择并支持本地商户和企业。

编程语言：
Draftbit 是一个无需编码和/或支持自定义代码的平台。我们建议在需要时使用无代码结构并结合自定义编码。Xano 是一个无需编码的数据库。我们有之前团队留下的笔记，可帮助您快速启动。

硬件/软件要求：
将提供 DraftBit 和 Xano

当前工作/安排：
上文已对此进行描述。目前有一个正在运行的应用程序工作副本，虽然功能基础，但数据库和前端已基本完成。

是否有过前期项目?
no

Project ID:
1096

Company:
Accountium INC

Project Areas:
DevOps,Web Development,Other

Company Profile:
Building Accounting Software and the AI Accountant

Project Description:
Accountium is building Accounting Software and AI technology related to Accounting. We are looking for UI to improve the look of the Cloud Application and mobile version optimization; web designer for our presentation website, programmers for various modules inside the application.

Programming Language(s):
C#, PHP, HTML, Java

Hardware/Software Requirements:
laptop, PC, printer

Current Work/Arrangement:
The Team leader puts a request for task in the Azure devops and the developer get's the task from there, push the code in the main branch and mark the task complete.

Previous Project?:
no

项目 ID：
1096

公司：
Accountium INC

项目领域：
DevOps,Web 开发,其他

公司简介：
构建会计软件与AI会计师

项目描述：
Accountium 正在构建会计软件及相关的人工智能技术。我们正在寻找UI设计以改进云应用及移动端版本优化；负责展示网站的网页设计师，以及负责内部各个模块的程序员应用程序的外观。

编程语言：
C#、PHP、HTML、Java

硬件/软件要求：
笔记本电脑、台式机、打印机

当前工作/安排：
团队负责人在 Azure DevOps 中提交任务请求，开发人员从那里获取任务，将代码推送到主分支，并标记任务为完成。

之前参与过项目？：
no

Project ID:
1113

Company:
Soul Surfer Software

Project Areas:
DevOps

Company Profile:
We are currently developing three apps: financial analysis, community based software and tip sharing application.

Project Description:
This project is a continuation of a project that began as part of a ISSP project at BCIT in January 2025. The app's name is Equitip, and it is a tip sharing calculator and distribution app along with a PWA (progressive web app). It uses adjustable settings and mathematics to allow staff tip pools to customize their tip distributions to create fair distributions among members. EquiTip is currently published at the App Store and Google Play Store. The next phase of the project is to complete the PWA version of the app and complete the development work to install the fintech back end for the app. We will be using a Canadian company as our fintech back end to provide distributions from businesses to their staff members directly.

Programming Language(s):
React Native is primary language

Hardware/Software Requirements:
We are currently using Draftbit (no code/custom) for the front end and Xano for the backend. While a Mac workstation is simpler to set up, PC work stations are possible for the builds.

Current Work/Arrangement:
Tasks are currently carried out remotely. We use discord for communication and meeting and work tickets are distributed by the team lead

Previous Project?:
yes

项目 ID：
1113

公司：
Soul Surfer Software

项目领域：
DevOps

公司简介：
我们目前正在开发三款应用：财务分析、基于社区的软件以及小费分享应用。

项目描述：
本项目是此前于2025年1月在BCIT作为ISSP项目启动的一个项目的延续。该应用名为Equitip，是一款小费共享计算与分配应用，并包含一个PWA（渐进式网络应用）。它通过可调节的设置和数学算法，使员工小费池能够自定义小费分配方式，从而在成员之间实现公平分配。EquiTip目前已发布在App Store和Google Play Store。项目的下一阶段是完成应用的PWA版本，并完成金融科技后端的开发工作，以便企业能够直接向其员工进行资金分发。我们将采用一家加拿大公司作为本项目的金融科技后端服务提供商。

编程语言：
主要语言为React Native

硬件/软件要求：
我们目前使用Draftbit（无代码/自定义）进行前端开发，后端则使用Xano。虽然Mac工作站更便于搭建环境，但PC工作站也可用于构建。

当前工作/安排：
任务目前以远程方式执行。我们使用 Discord 进行沟通和会议，工作工单由团队负责人分配。

先前项目？：
yes

Project ID:
1133

Company:
IATSE Local 891

Project Areas:
Web Development,Mobile Development

Company Profile:
IATSE 891 consists of over 10,000 professional artists and technicians who work in film and television production in BC. We support all genres of production at all budget levels and have made some of the biggest feature films and some of the longest running and most successful television series ever screened. From our earliest days, we have actively participated in the development and growth of the film and television production industry in BC and marketed our province as a premier filming destination. Our approach is to supply world class talent and act reasonably to ensure a stable labour relations climate within our industry. IATSE 891 provides its members with an extended health and dental plan, an RRSP plan, an employee and family assistance plan, and access to other benefits. We also provide our members with ongoing training with a strong emphasis on safety.

Project Description:
IATSE 891 is committed to advocating for whole person safety for every worker. Through this project, we want to establish a stand alone web portal for 891 members to be able to record and report incidents of unsafe work, harassment, bullying, or workplace violence. We have branding and content prepared, and a general structure in mind, so this project would focus on creating the technical platform to allow members to submit full reports for investigation(with personal contact information), submit a report anonymously, or reach out for help to a steward or ombudsperson. We have several reference examples from other similar projects run by other unions in the US, and a clear list of project milestones and deliverables. The leads internally are Hillary Bergshoeff (Assistant Business Representative) and Quentin Bennetti (Communications Coordinator). Our ideal working partner(s) would be a team committed to growing worker safety and power at work, and empowering rank and file workers with the ability to hold their Employers accountable for providing a safe workplace for every worker.

Programming Language(s):
TBD

Hardware/Software Requirements:
The portal should be accessible for any member, via any mobile, tablet or desktop device. The portal should also be designed for maximum compatibility with screen readers, and other accessibility supports - particularly important for this project as our research has made it clear that workers with intersectional underrepresented characteristics and disabilities are at significantly higher risk of workplace harm.

Current Work/Arrangement:
If we are not chosen here we will likely have to wait to develop the web portal until the 2027 budget year and send out an RFP to market.

Previous Project?:
no

项目 ID：
1133

公司：
IATSE Local 891

项目领域：
网页开发，移动开发

公司简介：
IATSE 891 由超过 10,000 名专业的艺术家和技术人员组成，他们在不列颠哥伦比亚省从事影视制作工作。我们支持各种类型、各种预算水平的制作项目，并参与制作了一些最具影响力的电影大片以及一些持续时间最长且最成功的电视系列剧。自成立以来，我们一直积极参与不列颠哥伦比亚省影视制作行业的发展与壮大，并将本省推广为顶级拍摄目的地。我们的宗旨是提供世界级的人才，并以合理的态度确保行业内稳定的劳资关系。IATSE 891 为其会员提供补充健康和牙科保险计划、RRSP 计划、员工及家庭援助计划以及其他福利。我们还为会员提供持续的培训，并高度重视安全。

项目描述：
IATSE 891 致力于为每位工人倡导全面的个人安全。通过本项目，我们希望为 891 会员建立一个独立的门户网站，以便记录和报告不安全工作、骚扰、欺凌或职场暴力事件。我们已准备好品牌资料和内容，并有大致的结构构想，因此本项目将专注于创建技术平台，使会员能够提交包含个人信息的完整报告以供调查、匿名提交报告，或联系工会代表或调解员寻求帮助。我们拥有来自美国其他类似工会项目的若干参考案例，以及一份清晰的项目里程碑和交付成果清单。项目内部负责人是希拉里·贝尔什奥夫（助理业务代表）和昆廷·贝内蒂（传播协调员）。我们理想的合作伙伴是一个致力于提升工人在工作中的安全与权益，并赋予基层工人能力以督促雇主为所有员工提供安全工作环境的团队。

编程语言：
TBD

硬件/软件要求：
该门户应可供任何成员通过手机、平板电脑或台式机设备访问。门户还应设计为最大程度兼容屏幕阅读器及其他辅助功能支持——这对本项目尤为重要，因为我们的研究明确表明，具有交叉性弱势特征和残疾的劳动者面临更高的职场伤害风险。

当前工作/安排：
如果我们此次未能被选中，我们可能不得不等到2027财年才能开发该门户网站，并需向市场发布招标书。

先前项目：
no

Project ID:
1135

Company:
KOM Community Policing Centre

Project Areas:
Mobile Development

Company Profile:
KOM Community Policing Centre (KOM CPC) is a volunteer-driven organization committed to enhancing safety and connection in Vancouver's neighbourhoods. We work closely with a range of stakeholders, including residents, local businesses, schools, and social agencies, to deliver effective crime prevention, public education, and community engagement programs. In partnership with the Vancouver Police Department (VPD), KOM CPC helps bridge the gap between law enforcement and the community, fostering collaboration, trust, and proactive solutions that promote lasting neighbourhood well-being. Our inclusive approach ensures everyone has a voice in creating a safer, more vibrant community.

Project Description:
ChildGuard ID Mobile App Project Description ChildGuard ID is an innovative mobile application developed for the KOM Community Policing Centre (KOM CPC) to enhance child safety within the community. The app allows parents and guardians to securely store and manage essential identification information for children directly on their smartphones. The primary development focus is on the iOS platform, with potential Android support if time and resources permit. Project Goals - Develop a secure iOS mobile application that enables families to save a child's physical description, medical details, and photographs using local device storage. - Facilitate rapid emergency communication by enabling quick sharing of child profiles with trusted contacts and community policing centre personnel. - Incorporate location feature so parents can attach location information to profiles and share updates efficiently. - Ensure strong privacy and security by prioritizing local storage of sensitive data with optional future cloud integration. - Design a user-friendly interface tailored for easy and quick access in emergency situations. Community Context This project supports the mission of KOM CPC to keep children safe in the community. While KOM CPC works closely with the Vancouver Police Department (VPD), this app is an independent initiative of the community policing centre. Once completed, ChildGuard ID will be available to any Community Policing Agency, enabling broader use and impact in improving child safety across communities. Expectations for Student Teams - Technology choice freedom: Students may use any iOS development frameworks or tools they prefer. - Implement secure and reliable local data storage with documentation on potential cloud tie-in options. - Develop profile management and secure sharing capabilities suited to real-life emergency needs. - Conduct usability testing with input from KOM CPC representatives. - Provide detailed technical and user documentation. - Engage in regular communication with KOM CPC project sponsors for feedback and guidance. Value & Impact ChildGuard ID will be a valuable tool for families and community policing centres, enabling faster and safer responses when children go missing or require immediate assistance. This project offers students hands-on experience in mobile development, data privacy, and creating solutions with tangible community benefits.

Programming Language(s):
Freedom in tool selection: Students may use any iOS development framework or toolkit (e.g., SwiftUI, UIKit, React Native, Flutter for iOS) based on their strengths and interests.

Hardware/Software Requirements:
App just needs to run on Apple iPads/Phones. We do have an Apple Developer Account.

Current Work/Arrangement:
The KOM Community Policing Centre (KOM CPC) manages child identification information through a paper-based process. Historically, much of this work was supported by Child Find BC, an organization dedicated to helping locate missing children. Child Find BC provided forms, collected information, and offered guidance on swift emergency response. However, Child Find BC has since gone out of business, leaving a gap in local child safety resources that now needs to be addressed. Currently, these tasks are carried out as follows: - Collecting Information: Parents and guardians fill out paper forms provided by the CPC, noting the child's physical description, medical details, and recent photographs. These forms were originally distributed and managed with Child Find BC's guidance. - Storing Records: The completed forms are securely stored on CPC premises in physical filing systems. - Updating Information: Any updates or changes require families to visit the centre in person, resubmitting new details and photographs. - Access and Sharing: In case of an emergency, CPC staff must manually retrieve and copy paper records, then share information with police or search organizations. Previously, Child Find BC would coordinate these responses; that centralized support no longer exists. - Status of Data: The information is only available in physical format, limiting accessibility, timely updates, and rapid sharing with authorities. With Child Find BC no longer operational, there is an immediate need to modernize and digitize the way child identification profiles are managed. A digital solution will ensure information is securely stored, easily updated, and quickly shared with police and community agencies, filling the void left by Child Find BC and helping keep children safer in Vancouver and beyond.

Previous Project?:
no

项目ID：
1135

公司：
KOM社区警务中心

项目领域：
移动开发

公司简介：
KOM社区警务中心（KOM CPC）是一个由志愿者驱动的组织，致力于提升温哥华社区的安全性和联系性。我们与包括居民、本地企业、学校和社会机构在内的各类利益相关方紧密合作，开展有效的犯罪预防、公众教育和社区参与项目。通过与温哥华警察局（VPD）的合作，KOM CPC帮助弥合执法部门与社区之间的差距，促进协作、信任以及积极主动的解决方案，以推动社区长期福祉。我们包容性的方法确保每个人都能为建设更安全、更有活力的社区发声。

项目描述：
ChildGuard ID 移动应用项目描述 ChildGuard ID 是为 KOM 社区警务中心（KOM CPC）开发的一款创新移动应用程序，旨在提升社区内儿童的安全保障。该应用允许家长和监护人通过智能手机安全地存储和管理儿童的重要身份信息。项目主要开发重点为 iOS 平台，若时间和资源允许，未来可能扩展支持 Android 平台。项目目标 - 开发一款安全的 iOS 移动应用，使家庭能够使用本地设备存储保存儿童的体貌特征、医疗信息和照片。 - 实现快速应急通信功能，便于将儿童档案迅速分享给受信任的联系人及社区警务中心人员。 - 集成位置功能，使家长可将位置信息附加到档案中，并高效共享更新内容。 - 强调隐私与安全保护，优先采用本地存储敏感数据，并预留未来可选的云集成方案。 - 设计用户友好的界面，确保在紧急情况下能方便快捷地访问。社区背景 本项目支持 KOM CPC 保障社区儿童安全的使命。尽管 KOM CPC 与温哥华警察局（VPD）密切合作，但本应用是社区警务中心的独立倡议。项目完成后，ChildGuard ID 将可供任何社区警务机构使用，从而更广泛地提升各社区儿童安全水平。对学生团队的期望 - 技术选择自由：学生可自由选用任何其偏好的 iOS 开发框架或工具。 - 实现安全可靠的本地数据存储，并提供关于潜在云集成选项的技术文档。 - 开发符合真实应急需求的档案管理和安全共享功能。 - 结合 KOM CPC 代表的意见进行可用性测试。 - 提供详尽的技术和用户文档。 - 定期与 KOM CPC 项目赞助方沟通，获取反馈和指导。价值与影响 ChildGuard ID 将成为家庭和社区警务中心的有力工具，在儿童走失或需要紧急援助时实现更快、更安全的响应。本项目为学生提供了移动开发、数据隐私保护以及创造具有实际社会效益解决方案的实践机会。

编程语言：
工具选择自由：学生可根据自身优势和兴趣使用任何 iOS 开发框架或工具包（例如 SwiftUI、UIKit、React Native、Flutter for iOS）。

硬件/软件要求：
应用只需能在苹果 iPad/手机上运行即可。我们拥有 Apple 开发者账户。

当前工作/安排：
KOM社区警务中心（KOM CPC）目前通过纸质流程管理儿童身份信息。历史上，这项工作大部分由“BC儿童寻回组织”（Child Find BC）支持，该组织致力于帮助寻找失踪儿童。Child Find BC曾提供表格、收集信息，并就快速应急响应提供建议。然而，Child Find BC现已停止运营，导致本地儿童安全资源出现空白，亟需填补。目前这些任务的执行方式如下：- 信息收集：家长和监护人填写由CPC提供的纸质表格，记录儿童的体貌特征、医疗详情以及近期照片。这些表格最初是在Child Find BC的指导下分发和管理的。- 记录存储：填写完成的表格以实体文件形式安全保存在CPC场所内的档案系统中。- 信息更新：任何更新或变更都需要家庭亲自前往中心，重新提交新的信息和照片。- 访问与共享：一旦发生紧急情况，CPC工作人员必须手动提取并复印纸质记录，然后将信息分享给警方或搜救机构。此前，此类响应由Child Find BC协调；这种集中化的支持现已不复存在。- 数据状态：所有信息仅以纸质形式存在，限制了信息的可访问性、及时更新以及与执法部门的快速共享。由于Child Find BC已不再运营，迫切需要对儿童身份档案的管理方式进行现代化和数字化改造。数字化解决方案将确保信息得到安全存储、便捷更新，并能迅速与警方及社区机构共享，从而弥补Child Find BC留下的空缺，帮助温哥华及更广泛地区的儿童更加安全。

先前的项目：
no

Project ID:
1140

Company:
Being Love Incorporated DBA The GOOD GOODBYE

Project Areas:
Web Development,Machine Learning/Algorithms/Research

Company Profile:
The Good Goodbye is a new company that is operating as a one stop shop for death related services and educational opportunities for the public. Currently we offer quarterly Symposiums bringing on experts to speak about different things like preplanning funeral arrangements, to the role of a death doula to how to process grief and deal with family disputes as they come up. We are looking to get a platform built for the general public so they dont get ripped off at a vulnerable time and can be told of what their choices actually are every step of the way. We are also focused on Cultural conversations and how to balance family disputes on how things should go so that everyone ends up satisfied. There is a huge need for transparency in the industry and we are here to help people through this difficult time. We are looking to create interactive AI components to the website. We are looking to different subscription levels and be affordable for anyone to commit to. (looking at 3-5 dollars a month as a first level base).

Project Description:
We are looking to create a subscription platform where people can interact with AI technologies to get help with funeral planning, a marketing platform for death related service providers, and a place where people can get information on whatever they are dealing with when it comes to death. We are looking to develop an interactive space where community can come together. We are also aiming to create a secure space for people to put memory documents into a secure server that is able to hold video wills, will drafts and any private things they would like to store safely. We really just need to get the foundations set up for everything at this point. I (Kimberlee Klein) have worked with development teams before in previous years for other unrelated projects and have a large bank of code available if the students want to re-use any of the code that will help move this project faster.

Programming Language(s):
You can choose. The database of code available from Camosun college students was React, JS node.

Hardware/Software Requirements:
Not sure.

Current Work/Arrangement:
Currently we have Replit set up and no back end has developed for real (so its deemed useless :)) I would like a student development team to decide what would be best to use in real life for developing this platform. i do have access to a huge amount of code if the students need ideas or can reuse code from other years.

Previous Project?:
no

项目编号：
1140

公司：
Being Love Incorporated DBA The GOOD GOODBYE

项目领域：
Web开发,机器学习/算法/研究

公司简介：
Good Goodbye 是一家新公司，致力于成为与死亡相关服务及公众教育机会的一站式平台。目前我们每季度举办研讨会，邀请专家就各类主题进行讲解，例如提前规划丧葬安排、临终陪伴者（death doula）的角色、如何处理悲伤情绪以及应对家庭纠纷等。我们希望搭建一个面向公众的平台，使人们在脆弱时刻不会被欺骗，并能在每个环节清楚了解自己真正的选择。我们还关注文化对话，力求在家庭成员对丧葬事宜产生分歧时实现平衡，让各方最终都能感到满意。行业迫切需要透明度，而我们的使命正是帮助人们度过这一艰难时期。我们计划在网站中加入互动式人工智能组件，并推出不同层级的订阅服务，确保任何人都能以可负担的价格参与（初步基础级别目标为每月3至5美元）。

项目描述：
我们希望创建一个订阅平台，让人们可以通过与人工智能技术互动来获得殡葬规划方面的帮助，为与死亡相关的服务提供商建立一个营销平台，并提供一个人们可以获取与死亡相关任何问题信息的场所。我们希望打造一个互动空间，让社区成员能够聚集在一起。我们还旨在创建一个安全的空间，让人们可以将记忆文档存入安全的服务器中，该服务器能够保存视频遗嘱、遗嘱草稿以及他们希望安全存储的任何私人资料。目前我们最需要的是为所有这些内容打下坚实的基础。我（Kimberlee Klein）在过去几年曾与其他不相关的项目开发团队合作过，拥有大量现成的代码资源，如果学生们希望复用其中任何有助于加快本项目进展的代码，都可以使用。

编程语言：
可自行选择。来自卡莫森学院学生可用的代码库主要基于 React、JS 和 Node。

硬件/软件要求：
不确定。

当前工作/安排：
目前我们已经设置了 Replit，但实际上还没有开发后端（因此被认为无用：））。我希望有一个学生开发团队来决定在现实生活中使用什么技术栈来开发这个平台。如果学生需要灵感或想复用往年的代码，我确实可以提供大量代码资源。

先前项目？：
no

Project ID:
1147

Company:
Grant Hochman

Project Areas:
empty

Company Profile:
I am submitting as an individual.

Project Description:
Project: To create an app (or software) that will record and transcribe an unknown language. In other words, it will record and transcribe unknown or very unusual words and phrases. Observation and reason for the app or software need: I am a caregiver for my wife with Alzheimer's disease. While she still has a few phrases in English, when she speaks her own “language” the facial expressions and tone of voice suggest this is both a real and meaningful language for her. I would like to have the opportunity to repeat back various portions of her language to see if this brings a knowing response. If so, this will provide one more means of communication. Everyone suffering from this disease will have their own “language.” It's estimated that over 55 million people are suffering with this terrible disease worldwide, so if successful, this could provide some unexpected help to many people. Need: Currently I’ve not been able to locate an app or software for this situation: The present apps only record and transcribe known languages. If it's unknown, the app. will guess at equivalent sounding English words, rendering it useless. I want to add that if it's too difficult to record and transcribe, then transcribing only is to be preferred. But I note that the recording allows one to hear the tone of voice and emphasis.

Programming Language(s):
No coding is required.

Hardware/Software Requirements:
The creation of an app or software will be needed.

Current Work/Arrangement:
As per the project description above, no app or software currently exists that can record and transcribe an unknown language.

Previous Project?:
no

项目编号：
1147

公司：
Grant Hochman

项目领域：空

公司简介：
我以个人身份提交。

项目描述：
项目：创建一个应用程序（或软件），用于记录并转录一种未知的语言。换句话说，它将记录并转录未知或非常特殊的词汇和短语。提出该应用或软件的原因与观察：我是一位阿尔茨海默病妻子的看护者。尽管她仍能说出一些简单的英语短语，但当她说出她自己的“语言”时，她的面部表情和语气表明，这对她而言是一种真实且有意义的语言。我希望有机会重复她语言中的某些片段，以观察她是否会表现出理解的反应。如果可行，这将为沟通提供一种新的方式。每一位患有此病的人都会有自己独特的“语言”。据估计，全球有超过5500万人正在遭受这种可怕疾病的折磨，因此如果该项目成功，可能会为许多人带来意想不到的帮助。需求：目前我尚未找到适用于这种情况的应用程序或软件——现有的应用程序仅能记录和转录已知语言；对于未知语言，它们会尝试猜测发音相近的英语单词，从而导致结果毫无用处。我想补充的是，如果同时实现录音与转录过于困难，那么仅实现转录也是可接受的。但我注意到，录音功能可以让人听到说话的语调和重音。

编程语言：
无需编写代码。

硬件/软件要求：
需要创建一个应用程序或软件。

当前工作/安排：
根据上述项目描述，目前尚不存在能够记录和转录未知语言的应用程序或软件。

先前的项目？：
no

Project ID:
1148

Company:
Element Health

Project Areas:
Mobile Development,Games,Machine Learning/Algorithms/Research

Company Profile:
At ElementHealth, we are driven by a shared passion for improving well-being through technology and Traditional Chinese Medicine (TCM). Our team brings together expertise across data analytics, business strategy, and product development, allowing us to create solutions that are both evidence-based and user-friendly. With strong backgrounds in research, software development, and project management as well as the support of our partners PBY Ventures, we combine global perspectives and practical experience to deliver a product that bridges the gap between ancient wisdom and modern lifestyles. Collectively, we've worked on initiatives ranging from data science and analytics to healthcare operations and education. This diversity enables us to design tools that not only track personal health but also empower users with actionable insights. What unites us is a commitment to making health accessible, engaging, and meaningful. We believe that health is more than just numbers—it's about daily balance, habits, and human connection. ElementHealth was built on this belief, and our team is dedicated to helping users take small, consistent steps toward a healthier and more harmonious life.

Project Description:
We are looking to add a few gamification features to our existing apps (Android and Apple). The idea is that a user will be encouraged and rewarded for continuing healthy habits which will overtime help them by reinfocing positive behaviors.

Programming Language(s):
PRimarily javascript

Hardware/Software Requirements:
The students will need access to both an android and apple device for eventual testing which we can provide but really there are no significant hardware requirements.

Current Work/Arrangement:
We have two apps in production which we developed with the help of our dev partner. We are looking to add new features.

Previous Project?:
no

项目 ID：
1148

公司：
Element Health

项目领域：
移动开发, 游戏, 机器学习/算法/研究

公司简介：
在 ElementHealth，我们怀着共同的热情，致力于通过科技与中医（TCM）改善人们的健康福祉。我们的团队汇聚了数据分析师、商业战略专家和产品开发人员的专业知识，使我们能够创造出既基于证据又易于使用的解决方案。凭借在科研、软件开发和项目管理方面的深厚背景，以及合作伙伴 PBY Ventures 的支持，我们将全球视野与实践经验相结合，打造出连接古老智慧与现代生活方式的产品。我们曾共同参与从数据科学与分析到医疗运营和教育等多个领域的项目。这种多样性使我们能够设计出不仅可追踪个人健康状况，还能为用户提供可操作洞察的工具。让我们凝聚在一起的，是对让健康变得触手可及、富有参与感且意义深远的坚定承诺。我们相信，健康不仅仅是数字——它关乎日常的平衡、习惯以及人与人之间的联系。ElementHealth 正是基于这一信念而创立，我们的团队致力于帮助用户通过持续而微小的步伐，迈向更健康、更和谐的生活。

项目描述：
我们希望为现有的应用程序（Android 和 Apple）添加一些游戏化功能。其理念是鼓励用户坚持健康习惯，并给予奖励，从而通过强化积极行为，长期帮助他们改善行为模式。

编程语言：
主要使用 JavaScript

硬件/软件要求：
学生最终需要能够访问 Android 和 Apple 设备进行测试，我们可以提供这些设备，但实际上并无显著的硬件要求。

当前工作/安排：
我们有两个由开发合作伙伴协助开发的生产环境应用，现在希望添加新功能。

以前的项目？：
no

Project ID:
1150

Company:
Granville Biomedical Inc.

Project Areas:
Mobile Development,Machine Learning/Algorithms/Research

Company Profile:
Granville Biomedical is a Canadian health-tech company specializing in the design of women's anatomical pelvic health models to enhance clinical practice and advance patient education. The life-like anatomical training models designed by Granville Biomedical can be used to rehearse routine exam and surgical procedures. Through interdisciplinary research, collaborative design and execution, Granville Biomedical aims to advance international medical education and healthcare training by improving access to advanced simulation learning opportunities and anatomical models.

Project Description:
The Granville Biomedical app provides educational content relating to women's pelvic health and our anatomical models to our customers. A preliminary version of the app, including video tutorials and product information, was submitted to the App Store and Google Play Store by the Fall 2025 team. We are now looking to develop the next iteration of the app. Priorities for the next iteration of the app include: - Expanding out the AI portion of our app by developing learning modules on various pelvic health topics for iOS and Android - Setting up In-App Payment for subscription users - Submitting the updated version of the app to the App Store and Google Play Store

Programming Language(s):
Previous BCIT students have used: - JavaScript - React Native

Hardware/Software Requirements:
Previous BCIT students have used personal hardware such as laptops and smart phones. At least one team member will need to have iOS devices for testing. Previous students have also used the following: - Github - Visual Studio Code - Android Studios - Expo CLI - Firebase - Xcode - Npm - Trello - Figma

Current Work/Arrangement:
Granville currently does not have a development team. All application work has been conducted previously by BCIT students.

Previous Project?:
yes

项目ID：
1150

公司：
格兰维尔生物医学公司

项目领域：
移动开发,机器学习/算法/研究

公司简介：
Granville Biomedical 是一家加拿大医疗科技公司，专注于女性解剖盆底健康模型的设计，以提升临床实践并推动患者教育。Granville Biomedical 设计的逼真解剖训练模型可用于演练常规检查和手术操作。通过跨学科研究、协作设计与实施，Granville Biomedical 致力于提升国际医学教育和医疗培训水平，改善先进模拟学习机会和解剖模型的可及性。

项目描述：
Granville Biomedical 应用为客户提供与女性盆腔健康相关的教育内容以及我们的人体解剖模型信息。2025年秋季团队已向App Store和Google Play Store提交了该应用的初步版本，其中包括视频教程和产品信息。我们现在希望开发该应用的下一个版本。下一版本的优先事项包括： - 通过为iOS和Android平台开发有关各种盆腔健康主题的学习模块，扩展应用中的AI功能 - 为订阅用户设置应用内支付 - 将更新后的应用版本提交至App Store和Google Play Store

编程语言：
往届BCIT学生曾使用过： - JavaScript - React Native

硬件/软件要求：
往届BCIT学生曾使用个人硬件设备，例如笔记本电脑和智能手机。至少需要一名团队成员拥有iOS设备用于测试。往届学生还曾使用以下工具： - Github - Visual Studio Code - Android Studios - Expo CLI - Firebase - Xcode - Npm - Trello - Figma

当前工作/安排：
目前Granville没有开发团队。所有应用程序工作此前均由BCIT的学生完成。

先前的项目？：
yes

Project ID:
1153

Company:
WorkSafeBC

Project Areas:
Mobile Development

Company Profile:
WorkSafeBC is a provincial workers compensation organization that supports workplace health and safety, injury prevention, and return to work. We provide services to employers and workers across British Columbia and develop tools and resources that promote safer worksites. Our Innovation team partners with industry, researchers, and educators to explore new ideas and create solutions that improve safety outcomes.

Project Description:
Fall protection plans are required on many construction and maintenance worksites, but employers often rely on paper forms, printed drawings, or hand drawn sketches. On a worksite, people almost always have a phone, but they may not have access to a printer or laptop. This project invites students to design and build a mobile app that makes it easy for employers and workers to create a fall protection plan directly on their device. The app should guide users through the key sections of the existing WorkSafeBC Fall Protection Plan template. This includes entering basic site information, describing work at heights, identifying hazards, selecting the type of fall protection system, and documenting rescue procedures. The template also includes a diagram page where employers sketch anchor points, roof edges, access points, and hazard locations. The mobile app should support this by allowing users to upload or take a photo of a site drawing, or use a map view, and then place anchors and hazards using simple drag and drop tools. Key features may include: * A guided workflow that follows the Fall Protection Plan template * Entry fields for site details, hazards, selected systems, and procedures * Uploading or photographing a drawing or map * A map or overhead image layer * Drag and drop placement of anchors, access points, and hazards * A digital signature or initial feature so workers can confirm they have reviewed the plan * A simple export option such as PDF or screenshot The domain is workplace safety and injury prevention. The template defines what must be included in a fall protection plan and provides the structure the app should follow. We can supply the template, explain each section in plain language, and help the team understand why certain information is required. We also believe students may have an advantage in understanding how younger workers think and engage with digital tools. We welcome their insights and creative approaches to designing an app that is intuitive, modern, and effective for today's workforce. The project has an achievable and flexible scope. Students may take on the full end to end workflow or focus on a subset such as the diagram interface, the guided entry form, or the digital signature and export capability. We will collaborate with the team to set milestones based on the skills and interests of the students. Our team includes both technical and domain experts who can answer questions about workplace safety requirements, mobile app design considerations, and general development approaches.

Programming Language(s):
We are open and flexible to using the best technology for the project. Internally, we work with Microsoft .NET and Microsoft Azure, but students can choose the technologies they are most comfortable with. Python is acceptable for any AI related components or data handling.

Hardware/Software Requirements:
No special hardware is required. Standard laptops or desktops are sufficient. We cannot provide access to our Azure environment. Students may use their preferred development tools, libraries, and platforms. We can provide the Fall Protection Plan template and guidance on our general technology environment and domain knowledge.

Current Work/Arrangement:
This is not applicable.

Previous Project?:
no

项目 ID：
1153

公司：
WorkSafeBC

项目领域：
移动开发

公司简介：
WorkSafeBC 是一家省级工人赔偿机构，致力于支持 workplace 健康与安全、伤害预防以及工伤后重返工作岗位。我们为不列颠哥伦比亚省各地的雇主和工人提供服务，并开发促进工作场所安全的工具和资源。我们的创新团队与行业、研究人员和教育工作者合作，探索新想法并创造能够改善安全成果的解决方案。

项目描述：
许多建筑和维护作业场所都需要高处作业防坠落计划，但雇主通常依赖纸质表格、打印图纸或手绘草图。在作业现场，人们几乎总是随身携带手机，但却可能无法使用打印机或笔记本电脑。本项目邀请学生设计并开发一款移动应用程序，使雇主和工人能够直接在自己的设备上轻松创建防坠落计划。该应用程序应引导用户完成现有的WorkSafeBC防坠落计划模板中的关键部分，包括填写基本的场地信息、描述高空作业内容、识别危险源、选择防坠落系统类型以及记录救援程序。模板中还包括一张示意图页面，雇主可在其上绘制锚固点、屋顶边缘、出入口位置和危险区域。移动应用应支持此功能，允许用户上传或拍摄现场图纸照片，或使用地图视图，然后通过简单的拖放工具来标记锚点和危险源。主要功能可包括：* 遵循防坠落计划模板的引导式工作流程 * 用于填写场地详情、危险源、所选系统和程序的输入字段 * 上传或拍摄图纸或地图照片 * 地图或俯视图图层 * 拖放方式放置锚点、出入口和危险源 * 数字签名或签章功能，以便工人确认已审阅该计划 * 简单的导出选项，例如PDF或截图。该领域为 workplace safety 和 injury prevention（工作场所安全与伤害预防）。模板定义了防坠落计划必须包含的内容，并提供了应用程序应遵循的结构。我们可以提供该模板，用通俗语言解释每个部分，并帮助团队理解为何需要特定信息。我们还认为，学生可能更了解年轻工人如何思考以及如何使用数字工具，因此在这方面具有优势。我们欢迎他们提出见解和富有创意的设计方法，以打造一款直观、现代且适用于当今劳动力的应用程序。该项目范围明确且灵活，学生可以承担端到端的完整流程，也可以专注于其中一部分，例如示意图界面、引导式表单录入，或数字签名与导出功能。我们将与团队合作，根据学生的技能和兴趣设定里程碑。我们的团队包括技术专家和领域专家，可解答有关工作场所安全要求、移动应用设计考虑因素以及通用开发方法的问题。

编程语言：
我们对使用最适合项目的技术持开放和灵活的态度。内部我们使用 Microsoft .NET 和 Microsoft Azure，但学生可以选择自己最熟悉的技术。Python 可用于任何与人工智能相关的组件或数据处理任务。

硬件/软件要求：
无需特殊硬件。标准笔记本电脑或台式机即可满足需求。我们无法提供对我们 Azure 环境的访问权限。学生可使用自己偏好的开发工具、库和平台。我们可以提供防坠落计划模板，以及有关我们通用技术环境和领域知识的指导。

当前工作/安排：
这不适用。

先前的项目：
no

Project ID:
1154

Company:
Being Love Incorporated DBA Woo Woo Network

Project Areas:
DevOps,Web Development,Scripting/IT

Company Profile:
I have a functional website that needs to be beta tested with users to ensure bugs and protocols are taken care of. Woo Woo Network is a platform where healers are connected to clients. The idea is that healers suck at marketing and collecting money for their services. Woo Woo Network is here to connect clients to healers and also showcase real life results on what the healer has accomplished with each client so as to make us understand that nature of impact the healer is capable of. Mental health issues are addressed easily.

Project Description:
I have been working with students to develop this in the past. It is finally ready to be beta tested for the real world and I am already aware of systems that have not been thought out yet such as when money is received on Stripe, how to set up the healer to ensure they are automatically getting paid out. I know there are more processes that need to be tackled and solved before a major launch of these services. This opportunity would bring students together to launch a web based application and work through bugs as needed and set up a updating software processes that can potentially be automated. Also there may be an opportunity to create new features for the app if there is seen a need.

Programming Language(s):
React, Js Node, I am not a techy. AWS. I do have a tech person available to connect with the students.

Hardware/Software Requirements:
React, JS Node, AWS,

Current Work/Arrangement:
Currently the website is officially up and running. It has not been beta tested yet. It is sitting on AWS.

Previous Project?:
yes

项目 ID：
1154

公司：
Being Love Incorporated DBA Woo Woo 网络

项目领域：
DevOps，网页开发，脚本/IT

公司简介：
我有一个功能完整的网站，需要通过用户进行 beta 测试，以确保解决所有漏洞和协议问题。Woo Woo Network 是一个将治疗师与客户连接起来的平台。其理念是治疗师不擅长营销，也难以收取服务费用。Woo Woo Network 旨在将客户与治疗师对接，同时展示治疗师为每位客户取得的实际成果，以便我们了解治疗师所能产生的影响程度。心理健康问题可以借此得到轻松解决。

项目描述：
我一直在与学生合作开发此项目。现在终于可以进入真实环境的测试阶段了，但我已经意识到还有一些系统尚未考虑周全，例如当通过 Stripe收到款项时，如何设置治疗师以确保他们能自动获得付款。我知道在这些服务大规模发布之前，还有更多流程需要处理和解决。这个机会将让学生们共同协作，推出一个基于网页的应用程序，并根据需要修复漏洞，建立可更新的软件流程，这些流程未来甚至可能实现自动化。此外，如果发现有需求，也可能有机会为该应用程序开发新功能。

编程语言：
React、Js Node，我不是技术人员。AWS。我有一位技术人员可供学生对接联系。

硬件/软件要求：
React、JS Node、AWS,

当前工作/安排：
目前该网站已正式上线运行，尚未进行过 beta 测试，托管在 AWS 上。

以前的项目？：
yes

Project ID:
1155

Company:
Being Love Incorporated DBA Leftovers For All App

Project Areas:
DevOps,Web Development

Company Profile:
Leftovers in our home often get thrown out. Everyone feels bad when they throw food away. Im out to get rid of Middle Class Guilt! Before leftovers can turn bad, we can look in our fridge and put a picture of our perfectly good food that you will not eat on time, onto the app. A neighbor can look on the app and see that perfectly good food is available and arrange to pick the food up. When food is picked up, the giver will feel like a hero! We are also out to help families make ends meet cus food is a serious matter. Feeding your family is a serious matter. I have a Leftovers app that has already been developed and needs to be beta tested and put onto the app store properly. We are looking to do this as a project that can be launched into the world by end of April and in the project we will have onboarded at least 60 users.

Project Description:
Looking to launch a Leftovers For All app that makes a huge difference in real life for real users. Going through how to set up the app into the Play Store and App Store is part of the scope. Also dealing with bugs and seeing where improvements can be made in code will be vital to this project's success. We are looking to onboard at least 60 users by end of this project and to receive feedback from users that will inform improvements to be done by end of this semester (April 2026). The ultimate goal is to have this ready to go and ready for launching fully into communities by May 2026.

Programming Language(s):
flutter based, dart, java-kotlin, javascript/ node.js

Hardware/Software Requirements:
flutter, android studio, git, IOS firebase, gradle dart sdk

Current Work/Arrangement:
Currently i have code done and need the app to be launched properly in the app store. there are packages that need to be updated as the code is from 2023.

Previous Project?:
yes

项目 ID：
1155

公司：
Beijing Love 公司以 Leftovers For All App 名义运营

项目领域：
DevOps，网页开发

公司简介：
我们家中剩下的食物常常被扔掉。当人们丢弃食物时，都会感到内疚。我要消除这种中产阶级的负罪感！在剩菜变质之前，我们可以打开冰箱，将那些仍然完好的、只是你无法及时吃掉的食物拍下照片，上传到应用中。邻居可以通过应用查看，发现有可食用的好食物可供领取，并安排取走。当食物被成功取走时，赠送者会感觉自己像个英雄！我们也致力于帮助家庭减轻经济压力，因为食物是一件大事，养活家人更是一件严肃的事情。我已开发出一款名为“剩菜”的应用，目前需要进行 beta 测试并正式上线应用商店。我们希望将此作为一个项目，在四月底之前推向世界，并在此期间至少吸引 60 名用户注册使用。

项目描述：
计划推出一款名为“Leftovers For All”的应用，旨在为真实用户在现实生活中带来重大改变。本项目范围包括如何将该应用上架至 Play Store和App Store。同时，处理漏洞并发现代码中可改进之处对该项目的成功至关重要。我们希望在项目结束前至少吸引60名用户，并收集用户反馈，以便在本学期末（2026年4月）前进行优化改进。最终目标是确保该应用在2026年5月之前准备就绪，能够全面推向社区并正式上线。

编程语言：
基于Flutter，Dart，Java-Kotlin，JavaScript/Node.js

硬件/软件要求：
Flutter、Android Studio、Git、iOS Firebase、Gradle Dart SDK

当前工作/安排：
目前我已经完成了代码，需要将应用正确发布到应用商店。由于代码来自2023年，有一些包需要更新。

以前的项目？：
yes

Project ID:
1157

Company:
N/A

Project Areas:
Web Development

Company Profile:
This is a non-profit entrepreneurial initiative led by Yaniv Talmor. The project focuses on democratizing high-level financial planning tools for independent life insurance advisors. We are building a "Financial Needs Analysis" (FNA) web application that helps advisors calculate complex estate liabilities, tax burdens, and insurance gaps for their clients. The project operates in a modern, agile environment, aiming to replace archaic spreadsheet-based workflows with a secure, cloud-native SaaS solution.

Project Description:
Project Title: Financial Needs Analysis v2.0 – AI-Integrated InsurTech SaaS Description: We are seeking a skilled team of Full-Stack Web Development (FSWD) students to architect and build Version 2.0 of a validated financial modeling platform for life insurance advisors. The application automates the complex math required for estate planning and corporate risk analysis, and integrated AI to author documents and improve compliance. Students will work with an existing v1 codebase (built in Next.js/Drizzle) as a reference specification to build a production-grade v2.0. Key Modules to Build/Refactor: Complex Financial Engines: Implement calculators for "Settling Requirements" (Probate, Final Taxes), "Income Replacement," and "Corporate Shareholder Analysis" (EBITDA contribution, Key Person risks). Interactive Data Dashboard: A visual report dashboard using Recharts to display Net Worth, Tax Burdens, and Liquidity scenarios. GenAI "Co-Pilot": Integration of LLMs (OpenAI) to analyze client financial data and auto-write compliance documents ("Reasons Why" letters) and cover letters. SaaS Infrastructure: Implementation of multi-tenancy via Kinde Auth, subscription gating via Stripe, and secure document handling via UploadThing. Competitive Analysis & Market Gap: The Canadian market is currently served by legacy incumbents such as: - Life Design Analysis (LDA) (https://www.lifedesignanalysis.com), - Equisoft/plan (https://advisor.equisoft.com/products/plan), - RazorPlan (https://razorplan.com), - Snap Projections (https://snapprojections.com), - NaviPlan (https://investcloud.com/naviplan-products/). While these platforms are robust, they often suffer from dated user interfaces, complex enterprise pricing, and a lack of modern, integrated Generative AI features. This project aims to disrupt the market by building a lightweight, "AI-native" alternative that prioritizes UX and speed—using the modern stack that tomorrow's developers need to know. The Student Experience (Mentorship Focus): This is a high-fidelity project. Students will be mentored by an experienced product owner and expected to adopt industry-standard DevOps practices. You will gain deep experience with Relational Database design (complex schemas involving beneficiaries, assets, and liabilities) and modern Type-Safe development. Success Metrics: - Deployment of v2.0 to Vercel with full CI/CD pipelines. - Successful migration or re-implementation of the v1 Drizzle schema. - A polished, responsive UI using Shadcn/ui that simplifies complex data entry.

Programming Language(s):
Framework: Next.js 14+ (App Router) Library: React Language: TypeScript (Strict Mode) Database/ORM: PostgreSQL (Neon) via Drizzle ORM Auth: Kinde Authentication UI Components: Shadcn/ui, Tailwind CSS, Recharts Services: Stripe (Payments), UploadThing (File Storage), OpenAI API (AI features) Version Control & DevOps: Github

Hardware/Software Requirements:
Students must provide their own development laptops. Access to GitHub. Familiarity with the above tech stack (or equivalent) Sponsor will provide environment variables and API keys for all paid services (Neon, Stripe, OpenAI, Kinde). Sponsor will provide a GitHub repository invite for this project.

Current Work/Arrangement:
A comprehensive v1 prototype currently exists. - Built on Next.js 14, React, Typescript hosted on Vercel. - Using Drizzle & Neon for relational DB. Uploadthing for file storage. - Shadcn & Recharts for UI. - Stripe, OpenAI, and Kinde as 3rd party services. - Github for version control and CI/CD DevOps. It contains the core business logic and database schema but requires re-architecting for scalability, better UI/UX flow, and codebase cleanup. Advisors currently rely on similar software or manual spreadsheets. The student team will have full access to the v1 GitHub repository to use as a "living specification" for building the refined v2.0.

Previous Project?:
no

项目 ID：
1157

公司：
N/A

项目领域：
网页开发

公司简介：
这是一个由 Yaniv Talmor 领导的非营利性创业项目。该项目致力于为独立人寿保险顾问提供普及化的高级财务规划工具。我们正在开发一款“财务需求分析”（FNA）网络应用程序，帮助顾问计算客户复杂的遗产负债、税务负担和保险缺口。该项目运行在现代化的敏捷环境中，旨在以安全的云原生 SaaS 解决方案取代陈旧的基于电子表格的工作流程。

项目描述：
项目标题：财务需求分析 v2.0 —— 集成AI的保险科技SaaS 平台描述：我们正在寻找一支技术娴熟的全栈Web开发（FSWD）学生团队，来设计并构建一个面向寿险顾问的、经过验证的财务建模平台的2.0版本。该应用可自动化处理遗产规划和企业风险分析所需的复杂计算，并集成人工智能来自动生成文档并提升合规性。学生将参考现有的v1版本代码库（基于Next.js/Drizzle构建），作为规范依据，开发出可用于生产的v2.0版本。需构建/重构的核心模块：复杂财务引擎：实现“结算需求”（遗嘱认证、最终税款）、“收入替代”以及“企业股东分析”（EBITDA贡献、关键人物风险）的计算器。交互式数据仪表盘：使用Recharts构建可视化报告仪表盘，展示净资产、税务负担和流动性情景。生成式AI“副驾驶”：集成大语言模型（OpenAI），用于分析客户财务数据，并自动生成合规文件（如“理由说明”信函）和封面信。SaaS基础设施：通过Kinde Auth实现多租户架构，通过Stripe实现订阅权限控制，并通过UploadThing实现安全的文档处理。竞争分析与市场空白：目前加拿大市场由以下传统厂商主导：- Life Design Analysis (LDA) (https://www.lifedesignanalysis.com)，- Equisoft/plan (https://advisor.equisoft.com/products/plan)，- RazorPlan (https://razorplan.com)，- Snap Projections (https://snapprojections.com)，- NaviPlan (https://investcloud.com/naviplan-products/)。尽管这些平台功能强大，但通常存在用户界面陈旧、企业级定价复杂以及缺乏现代集成的生成式AI功能等问题。本项目旨在通过构建一个轻量级、“AI原生”的替代方案来颠覆市场，优先考虑用户体验与响应速度——并采用下一代开发者必须掌握的现代技术栈。学生实践体验（导师指导重点）：这是一个高度贴近真实场景的项目。学生将接受经验丰富的项目负责人指导，并被要求采用行业标准的DevOps实践。你将深入掌握关系型数据库设计（涉及受益人、资产和负债的复杂模式）以及现代类型安全开发技能。成功指标：- 将v2.0版本部署至Vercel，并建立完整的CI/CD流水线。- 成功迁移或重新实现v1版本的Drizzle数据库模式。- 使用Shadcn/ui构建精致且响应式的用户界面，简化复杂的数据输入流程。

编程语言：
框架：Next.js **14+** (应用路由器) 库：React 语言：TypeScript（严格模式） 数据库/ORM：通过 Drizzle ORM 连接的 PostgreSQL (Neon) 认证：Kinde 身份验证 UI 组件：Shadcn/ui、Tailwind CSS、Recharts 服务：Stripe（支付）、UploadThing（文件存储）、OpenAI API（AI 功能） 版本控制与 DevOps：Github

硬件/软件要求：
学生必须自备开发用笔记本电脑。需拥有 GitHub 访问权限。熟悉上述技术栈（或同等技术）。赞助方将提供所有付费服务（Neon、Stripe、OpenAI、Kinde）的环境变量和 API 密钥。赞助方将为此项目提供 GitHub 仓库邀请。

当前工作/安排：
目前存在一个完整的 v1 版本原型。- 基于 Next.js 14、React 和 Typescript 构建，托管在 Vercel 上。- 使用 Drizzle 和 Neon 作为关系型数据库，Uploadthing 用于文件存储。- 使用 Shadcn 和 Recharts 构建 UI。- 集成 Stripe、OpenAI 和 Kinde 作为第三方服务。- 使用 GitHub 进行版本控制和 CI/CD DevOps。该原型包含核心业务逻辑和数据库架构，但需要重新架构以提升可扩展性、优化 UI/UX 流程并清理代码库。目前，顾问依赖类似软件或手动电子表格进行工作。学生团队将完全访问 v1 版本的 GitHub 仓库，并将其作为构建改进版 v2.0 的“活文档”参考。

先前项目：
no

Project ID:
1158

Company:
Iron52

Project Areas:
Mobile Development

Company Profile:
We specialize in people meeting people. People ACTUALLY meeting people. For events that are romantic, platonic, or open-ended.

Project Description:
This project has already begun. It is an iOS app whose interface is identical almost to that of the Tinder app. There are udemy.com tutorials that can guide the entire completion of the app-building process. The difference between Tinder and AceOfDates is that Tinder matches on looks, age, and romance...AceOfDates matches based on the following: the user enters a date and time (e.g. Thursday Nov 28 2025 PM) and a dollar amount (e.g. $13) and nearby matches will appear based on event offerings within that budget, for that date. Examples: - Jason is looking for a chess partner Thursday Nov 28 2025 PM for $0 - Michele is looking for a running partner Thursday Nov 28 2025 PM for $0 - John and Sue are looking for a Dungeons and Dragons partner Thursday Nov 28 2025 PM for $0 - Alby is looking for someone to go to a film festival with Thursday Nov 28 2025 PM for $10 i.e. Users swipe on event offerings, not on the person

Programming Language(s):
Swift, SwiftUI

Hardware/Software Requirements:
MAC (or else we can rent macs in the cloud for the students). XCode (or else we can rent macs in the cloud for the students).

Current Work/Arrangement:
The project is paused for development until ISSP.

Previous Project?:
yes

项目 ID：
1158

公司：
Iron52

项目领域：
移动开发

公司简介：
我们专注于人与人之间的会面，真正意义上的人与人见面。适用于浪漫的、纯友谊的或开放式关系的活动。

项目描述：
该项目已经开始。这是一个iOS应用，其界面几乎与Tinder应用完全相同。Udemy.com上有教程可以指导完成整个应用程序的开发过程。Tinder与AceOfDates之间的区别在于，Tinder根据外貌、年龄和恋爱关系进行匹配……而AceOfDates则基于以下方式进行匹配：用户输入一个日期和时间（例如2025年11月28日星期四下午）以及一个金额（例如13美元），系统将根据该预算和日期显示附近的活动匹配项。示例：- Jason正在寻找一位2025年11月28日星期四下午花费0美元的国际象棋伙伴 - Michele正在寻找一位2025年11月28日星期四下午花费0美元的跑步伙伴 - John和Sue正在寻找一位2025年11月28日星期四下午花费0美元的龙与地下城伙伴 - Alby正在寻找一位2025年11月28日星期四下午花费10美元一起参加电影节的人。即用户滑动选择的是活动内容，而不是人物。

编程语言：
Swift，SwiftUI

硬件/软件要求：
Mac（否则我们可以为学生租用云端的 Mac）。Xcode（否则我们可以为学生租用云端的 Mac）。

当前工作/安排：
该项目的开发已暂停，直到 ISSP。

先前的项目？：
yes

Project ID:
1165

Company:
WorkSafeBC

Project Areas:
Web Development

Company Profile:
WorkSafeBC is a provincial agency based in British Columbia dedicated to promoting safe and healthy workplaces. Established in 1917, it administers the workers' compensation system and partners with employers and workers to prevent workplace injuries, illnesses, and fatalities. The organization provides education, prevention programs, and regulatory compliance support, while offering no-fault insurance coverage for employers and compensation for injured workers. Serving over 2.7 million workers and approximately 285,000 employers, WorkSafeBC also supports recovery, rehabilitation, and safe return-to-work initiatives, ensuring long-term sustainability of workplace safety across the province.

Project Description:
Organizations that apply to become WorkSafeBC approved training providers often struggle to align their programs with regulatory requirements and core competencies. This creates delays, missing information, and repeated back and forth between applicants and reviewers. EduAlign AI is a proposed solution that helps applicants prepare stronger submissions while also supporting WorkSafeBC reviewers who evaluate these programs. This student project focuses on building a system that guides applicants through the key steps needed to submit a complete training provider package. Students would design features that help users map their learning materials to required competencies, check regulatory references for accuracy, confirm accessibility requirements, and document their complaints handling processes. The system could also use simple automation to flag missing information or inconsistencies and help applicants understand what still needs to be completed before they submit. For reviewers, the project could include an organized dashboard or workspace that displays each section of the submission in a clear, consistent format. This makes it easier for certification specialists and subject matter experts to evaluate programs, find information quickly, reduce administrative errors, and focus more on complex decisions rather than repetitive checks. Possible features include: * A guided workflow that walks applicants through each required section * A learning material mapping tool to connect content to core competencies * A regulatory reference checker that helps applicants ensure accuracy * Prompts for accessibility and complaints handling requirements * Automatic flags for missing or incomplete information * A simple reviewer view that organizes content clearly for evaluation * Export or download options for finalized submission packages The domain is training provider certification in workplace health and safety, but we will explain all requirements in plain language. The scope is flexible and can be shaped to match the skills and interests of the student team. WorkSafeBC staff with technical and domain knowledge will be available to support the project, answer questions, and help refine goals throughout the term.

Programming Language(s):
We are open and flexible to using the best technology for the project. Our environment uses Microsoft .NET and Microsoft Azure, but students may choose the tools they are most comfortable with. Options such as Python, JavaScript, React, or other modern development frameworks are acceptable.

Hardware/Software Requirements:
No special hardware is required. Standard laptops or desktops are sufficient. We cannot provide access to our Azure environment. Students may use their preferred development tools and platforms. We will provide guidance on the process, requirements, and general technical considerations.

Current Work/Arrangement:
Not applicable.

Previous Project?:
no

项目 ID：
1165

公司：
WorkSafeBC

项目领域：
网页开发

公司简介：
WorkSafeBC 是一家位于不列颠哥伦比亚省的省级机构，致力于促进安全和健康的工作场所。该机构成立于1917年，负责管理工人赔偿体系，并与雇主和工人合作，预防 workplace 工伤、疾病和死亡事件。该组织提供教育培训、预防项目以及合规监管支持，同时为雇主提供无过失保险保障，并为受伤工人提供赔偿。WorkSafeBC 服务超过270万名工人和约28.5万名雇主，同时还支持康复、复健以及安全返岗计划，确保全省 workplace 安全的长期可持续性。

项目描述：
申请成为WorkSafeBC认可的培训机构的组织，通常难以使其课程与法规要求和核心能力保持一致。这会导致审批延迟、信息缺失，以及申请人与审核人员之间反复沟通。EduAlign AI 是一个拟议的解决方案，旨在帮助申请人在提交申请前准备更完善的材料，同时支持 WorkSafeBC 的审核人员评估这些课程。本学生项目重点是构建一个系统，引导申请人完成提交完整培训提供方申请包所需的各个关键步骤。学生将设计一系列功能，帮助用户将其学习材料与所需能力进行映射，核对法规引用的准确性，确认无障碍访问要求，并记录其投诉处理流程。该系统还可以利用简单的自动化功能，标记缺失的信息或不一致之处，帮助申请人了解在提交前还需完成哪些内容。对于审核人员，该项目可包含一个条理清晰的仪表盘或工作区，以明确、统一的格式展示申请的每个部分。这有助于认证专员和领域专家更高效地评估课程，快速查找信息，减少行政错误，并将精力集中在复杂决策上，而非重复性检查。可能的功能包括：* 引导式工作流程，带领申请人逐项完成每个必需环节 * 学习材料映射工具，将课程内容与核心能力关联 * 法规引用检查器，帮助申请人确保准确性 * 关于无障碍访问和投诉处理要求的提示 * 自动标记缺失或不完整的信息 * 简洁的审核人员视图，清晰组织内容以便评审 * 最终申请包的导出或下载选项 本项目的领域为工作场所健康与安全方面的培训提供方认证，但我们将用通俗易懂的语言解释所有要求。项目范围灵活，可根据学生团队的技能和兴趣进行调整。在整个学期中，具备技术和领域知识的 WorkSafeBC 员工将提供支持，解答问题，并协助完善项目目标。

编程语言：
我们对使用最适合项目的技术持开放和灵活的态度。我们的环境使用 Microsoft .NET 和 Microsoft Azure，但学生可以选择自己最熟悉的工具。Python、JavaScript、React 或其他现代开发框架等选项均可接受。

硬件/软件要求：
无需特殊硬件。标准笔记本电脑或台式机即可满足需求。我们无法提供对我们 Azure 环境的访问权限。学生可使用自己偏好的开发工具和平台。我们将就流程、要求以及一般技术考虑事项提供指导。

当前工作/安排：
不适用。

先前的项目：
no

Project ID:
1166

Company:
Applied Research - BCIT

Project Areas:
empty

Company Profile:
BCIT's Center for IoT helps prepare students for the opportunities provided by IoT & AI. The collection and analysis of data goes beyond the realm of information technology and into the world of physical AI

Project Description:
The goal is to develop a mobile application that will be able to provide clear indication of the quality of air in a public restroom and will will provide alerts and recommendation to facilitate an optimized cleaning routine for large organizations such as YVR airport. The mobile device will need to connect by Wi-Fi or Bluetooth to a device that collects parameters such as: CO2, TVOC, temperature, humidity ,PM1.0, PM2.5, PM10 and HCHO (Will be provided by me). The collected data will need to be analyzed and compared to a wide set of conditions to provide recommendations and alerts.

Programming Language(s):
The students may choose their preference.

Hardware/Software Requirements:
HW will be provided by CARI. The final device will be selected with the students to ensure: 1. Meet the required parameter set 2. Provide easy connectivity to a mobile (Wi-Fi or Bluetooth) 3. The device has a clear API that enables development and integration. For example : http://bit.ly/48DXKb9

Current Work/Arrangement:
Currently YVR and most large organizations clean the restrooms on a pre-defined schedule and have no information whether they are cleaning too often or not often enough. They also have no ability to respond to a occurring situation.

Previous Project?:
no

项目 ID：
1166

公司：
应用研究 - BCIT

项目领域：
empty

公司简介：
BCIT 的物联网中心有助于帮助学生把握物联网和人工智能带来的机遇。数据的收集与分析已超越信息技术的范畴，进入物理人工智能的世界

项目描述：
目标是开发一款移动应用程序，能够清晰地显示公共卫生间空气质量状况，并提供警报和建议，以帮助大型机构（如温哥华国际机场 YVR）优化清洁流程。移动设备需要通过Wi-Fi或蓝牙连接到一个采集参数的设备，这些参数包括：CO2、TVOC、温度、湿度、PM1.0、PM2.5、PM10以及HCHO（由我方提供）。所采集的数据需要经过分析，并与一系列条件进行比对，从而生成建议和警报。

编程语言：
学生可自行选择偏好的编程语言。

硬件/软件要求：
硬件将由CARI提供。最终设备将与学生共同选定，以确保：1. 满足所需的参数集；2. 能够方便地与移动设备连接（Wi-Fi或蓝牙）；3. 设备具备清晰的API，便于开发和集成。例如：http://bit.ly/48DXKb9

当前工作/安排：
目前，YVR 和大多数大型机构都按照预先设定的时间表清洁洗手间，且无法得知清洁频率是否过高或不足。他们也无法及时应对突发情况。

先前项目？：
no

Project ID:
1184

Company:
South Arm Technology Services

Project Areas:
DevOps,Web Development,Scripting/IT

Company Profile:
A Vancouver based technology company that provides IT services and custom application development. On IT services side, focus is cybersecurity; on custom application side, focus is AI and automation.

Project Description:
Peer-Review Recruiting Platform Project Description: A web-based recruiting platform where job applicants review and rate each other using proven comparative judgment methodologies. Instead of traditional recruiter screening, applicants compare pairs of anonymized peer applications (e.g., "Which candidate is stronger: A or B?"). The platform aggregates these pairwise judgments into a ranked shortlist for employers. AI and automation is built in. But in this platform, AI/Automation works as assistant and do not make decisions. This is the core philosophy of this system: put people first. Business Problem: Hiring is broken. Many recruiters lack domain expertise to evaluate candidates, yet charge 15-20% of first-year salary. Meanwhile, AI tools on both sides (resume writers and screeners) have turned hiring into AI-vs-AI, removing human judgment. This platform puts domain peers—who can spot inflated resumes better than recruiters, at the center of screening. It reduces hiring costs, gives applicants transparency and feedback, and produces higher-signal candidate rankings. The unique part of the platform is it gives job applicants more power in the hiring process. Hiring process is a black box to job applicants, and it creates anxiety and feeling of being ignored. This platform is meant to change this. Key Components: Applicant submission portal Anonymization layer (strips PII before peer review) Smart resume formatting Comparative judgment interface (reviewers see pairs, never themselves) AI assistant that prompts reviewers for reasoning when judgments seem thin or inconsistent Employer dashboard showing ranked candidates with summarized peer rationale Reward system: applicants who complete more reviews gain more visibility in the review pool Anchor/Bait system: inject fake resumes to evaluate reviewers' work Expectations for Students: Be familiar with coding, Python or JavaScript. Have an AI-first mindset in development.

Programming Language(s):
Frontend: React Backend: Node.js or Python FastAPI Database: PostgreSQL AI integration: Vendor agnostic Hosting: Cloud-based The back end stack is not decided yet. Currently it's Python, but may entirely move to Node.js.

Hardware/Software Requirements:
Hardware can be provided upon request. Students are welcome to use own laptop. Azure Virtual Desktop (AVD) will be provided. Students will use company identity to login to AVD. Coding tool will be Visual Studio Code. Collaboration platform is Github Enterprise. All necessary software subscriptions will be provided.

Current Work/Arrangement:
This project is currently in active early planning and development stage

Previous Project?:
no

项目 ID：
1184

公司：
南臂技术服务公司

项目领域：
DevOps，网页开发，脚本/IT

公司简介：
一家位于温哥华的科技公司，提供 IT 服务和定制应用开发。在 IT 服务方面，专注于网络安全；在定制应用方面，专注于人工智能和自动化。

项目描述：
同行评审招聘平台项目描述：这是一个基于网页的招聘平台，求职者使用已被验证的比较判断方法相互评审和评分。与传统的招聘人员筛选不同，该平台让申请人对匿名的同侪申请材料进行成对比较（例如，“哪位候选人更强：A还是B？”）。平台将这些成对判断汇总，为雇主生成一个排序后的候选名单。平台内置人工智能和自动化功能，但在此平台中，AI/自动化仅作为助手，不参与决策。这是本系统的核心理念：以人为本。商业问题：招聘体系已失灵。许多招聘人员缺乏评估候选人的领域专业知识，却要收取第一年薪资15-20%的费用。与此同时，双方使用的AI工具（简历撰写工具和筛选工具）已使招聘变成AI对抗AI的过程，排除了人类判断。该平台将领域内的同行——比招聘人员更能识别夸大简历的人——置于筛选过程的核心位置。这有助于降低招聘成本，为申请人提供透明度和反馈，并产生更具参考价值的候选人排名。该平台的独特之处在于赋予求职者在招聘过程中更大的权力。当前招聘过程对求职者而言如同黑箱，容易引发焦虑感和被忽视感。本平台旨在改变这一现状。核心组件：申请人提交门户、匿名化层（在同行评审前去除个人身份信息）、智能简历格式化、比较判断界面（评审者看到的是成对申请，且永远不会看到自己）、AI助手（当判断显得单薄或不一致时提示评审者说明理由）、雇主仪表盘（展示按排名排列的候选人及同行评审摘要）、奖励机制：完成更多评审的申请人将在评审池中获得更高曝光度、锚点/诱饵系统：注入虚假简历以评估评审者的工作质量。对学生的要求：熟悉编程，掌握Python或JavaScript，具备以AI为先的开发思维。

编程语言：
前端：React 后端：Node.js 或 Python FastAPI 数据库：PostgreSQL AI 集成：供应商无关 部署：基于云 目前后端技术栈尚未确定。当前使用 Python，但可能会完全迁移到 Node.js。

硬件/软件要求：
可根据需要提供硬件。学生可自带笔记本电脑。将提供 Azure 虚拟桌面（AVD），学生需使用公司身份登录 AVD。编码工具为 Visual Studio Code。协作平台为 Github Enterprise。所有必要的软件订阅将统一提供。

当前工作/安排：
该项目目前处于积极的早期规划和开发阶段

是否有过项目经验？：
no

Project ID:
1187

Company:
Patrick Guichon (BCIT)

Project Areas:
Web Development

Company Profile:
I am an instructor at BCIT

Project Description:
There are a number of interactive SQL tutorial sites such as: https://sqlbolt.com, https://sqlzoo.net, https://www.interviewbit.com/problems/study-selection/ and https://sqlzap.com These sites show how to use SELECT statements in SQL Databases and have interactive hands-on exercises where users can practice writing queries, see the results and verify if their results match the required answer for the current question. As an instructor at BCIT and teaching into a number of introductory and advanced database courses, I see the importance for novice students to practice writing select queries in order to master this skill. While I encourage students in my courses to use these online tools, if I make them optional, students will often overlook them and not get the practical hands on skills that they need. The problem with the these above mentioned tools, is that I have no way to know if/when students completed them. I would like to make exercises required as part of the courses I teach and have students submit their work, but it is virtually impossible to confirm that the students have (truthfully) completed the work. My suggested solution and project project proposal for ISSP, is to recreate a similar site for which I can control the login information to help verify that students in my class have completed the work. The site should allow for the creation of lesson modules which group SELECT practice questions into groups based on syntax and difficulty and would log student student interactions. Students would log in, complete their required homework and submit proof of completion. The site needs to be secure so that students (users of the site) are not able to permanently destroy the data within the database (ex: via SQL Injection attack). It needs to also needs to prevent students cheating by claiming they finished the exercises on the site when they didn't. As part of the project, a test script (unit test) will be needed to created.

Programming Language(s):
Bun, Hono, Kinde, MySQL, Drizzle, Typescript, React, Vite,

Hardware/Software Requirements:
IDE such as VS Code Jira for Project/Time/Bug Management GitHub for Version Control

Current Work/Arrangement:
This is the second time this project has been worked on by students. Students are expected to work with an existing code base.

Previous Project?:
yes

项目 ID：
1187

公司：
Patrick Guichon (BCIT)

项目领域：
Web 开发

公司简介：
我是 BCIT 的一名讲师

项目描述：
有许多交互式 SQL 教程网站，例如：https://sqlbolt.com，https://sqlzoo.net，https://www.interviewbit.com/problems/study-selection/ 和 https://sqlzap.com。这些网站展示了如何在 SQL 数据库中使用 SELECT 语句，并提供交互式动手练习，用户可以在其中练习编写查询，查看结果，并验证其结果是否符合当前问题的要求答案。作为 BCIT 的一名讲师，教授多门初级和高级数据库课程，我深知初学者学生通过练习编写 SELECT 查询来掌握这项技能的重要性。虽然我鼓励课程中的学生使用这些在线工具，但如果我只是将其设为可选项，学生往往会选择忽略，从而无法获得所需的实践操作技能。上述工具存在的问题是，我无法知道学生是否以及何时完成了这些练习。我希望将这些练习作为我所教授课程的必修内容，并让学生提交他们的作业，但实际上几乎不可能确认学生是否真正（如实）完成了这些任务。我建议的解决方案以及针对 ISSP 的项目提案是：重建一个类似的网站，我可以控制其登录信息，以帮助验证我班上的学生是否已完成相关练习。该网站应允许创建课程模块，将 SELECT 练习题按照语法和难度进行分组，并记录学生的操作行为。学生需登录后完成指定的家庭作业，并提交完成证明。该网站必须具备足够的安全性，防止学生（即网站用户）永久性破坏数据库中的数据（例如通过 SQL 注入攻击）。同时，还必须防止学生通过虚假声称已完成练习来进行作弊。作为项目的一部分，需要创建测试脚本（单元测试）。

编程语言：
Bun、Hono、Kinde、MySQL、Drizzle、TypeScript、React、Vite、

硬件/软件要求：
IDE（例如 VS Code）、Jira（用于项目/时间/缺陷管理）、GitHub（用于版本控制）

当前工作/安排：
这是该项目第二次由学生进行开发。学生需要在一个已有的代码库基础上进行工作。

先前的项目？：
yes

Project ID:
1189

Company:
BAM Robotics

Project Areas:
empty

Company Profile:
BAM (Break & Make) Robotics is a Vancouver start-up developing low-cost AI-powered robots that sort mixed waste with the dexterity of a human and the speed and reliability of a machine. Pilot applications include sorting medical waste with a BC medical waste aggregator. The long-term vision is to develop a modular robotics system for the circular economy that can execute both "making" (including assembly) and various kinds of "breaking" (including sorting and disassembly.) Co-Founder & CEO/CTO, Zach Yamaoka: - Product Team @ Automata (UK start-up with $60M raised to develop low-cost robot arm) - NPI Robotics Engineer @ Dyson - Founder of 2 x successful Medical Technology Companies (Ambience PPE & D.future) - Audi Autonomous Car Cup Software Engineer @ Imperial College Robot Intelligence Lab Co-Founder & COO, Anna Yamaoka: - New York attorney - Researcher @ Urbanlogiq and Guarnini Global Law & Tech - 1st Class Honours and IP Law Prize from Oxford University (Law)

Project Description:
Accurate object detection in recycling and waste facilities is an open challenge. Typical issues include cluttered scenes, partial occlusions, dirt and contamination, object deformation (crushed, folded, torn), visually similar materials (e.g., plastic vs glass, or different plastics that look the same.) Hyperspectral imaging aims to provide more reliable object detection by capturing the scene across a wide spectrum of wavelengths, not just RGB. While objects may look very similar in just the 3 RGB channels, they often have distinct spectral signatures across many wavelengths. Because hyperspectral features are tied to material chemistry, they are much more robust to clutter, occlusion, deformation. (E.g. no matter how you crush a PET bottle, its spectral signature still indicates that it's plastic.) A hyperspectral camera by itself does not output “material =PET” or “object = bottle”. It simply returns intensity values at each wavelength. Supervised ML models are then trained to map these spectral signatures to target labels (material, object type, etc.). The major drawback of hyperspectral cameras is cost. For short-wave infrared (SWIR) hyperspectral cameras, we received quotes in the $20k–$50k range. In our design, we use many small robot arms, each doing ~60 picks per minute over a conveyor belt. To match the throughput of a large $200k optical sorter, we can deploy ~6 small arms costing around $20k in total. With this distributed approach, each small arm gets its own camera. The challenge is that it would be prohibitively expensive to give each arm its own hyperspectral camera, and runs counter to our goal of producing a low-cost robotic solution. So our goal is to match the performance of a hyperspectral system using only cheaper RGB cameras. In other words: How can we predict the same outputs as the hyperspectral camera (material, product type, and per-pixel instance) using only 3 RGB channels? Our idea: Use the hyperspectral camera as a “superior knowledge”oracle. Train a model that predicts the same labels using only RGB, using the hyperspectral model’s predictions as supervision. We are acquiring a hyperspectral and RGB Camera. We are taking as a starting point the Spectral Waste paper and Data Set: https://arxiv.org/abs/2403.18033 STUDENT CHALLENGES: There are several related sub-problems and datasets we want to work with. #1 - RGB + Spectral → Material/Object/Instance Spectral Waste Paper and baseline models: GitHub: https://github.com/ferpb/spectralwaste-segmentation Kaggle: https://www.kaggle.com/datasets/vijaynyayavn/spectralwaste Goal: Reproduce the Spectral Waste paper’s RGB +HYPER results. #2 - RGB → Material/Object/Instance #2(i) Spectral Waste Dataset We reuse the SpectralWaste dataset:- https://github.com/ferpb/spectralwaste-segmentation …but this time we only use the RGB images Goal: Reproduce paper results for RGB #2(ii) Zero Waste Dataset Downloads from here: Zero waste dataset: https://ai.bu.edu/zerowaste/ Zero waste v2 dataset: https://github.com/dbash/visda2022-org Goal: Reproduce paper results #2(iii) Zero Waste Dataset + Spectral Waste Goal: Combine both datasets and try to achieve a superior result An interesting challenge is that the spectral RGB is a line scanner while the zero waste is an area scanner (this is described in notes below) #3 - RGB → Spectral #3(i) NTIRE 2022 Spectral Recovery Challenge Overview paper : https://openaccess.thecvf.com/content/CVPR2022W/NTIRE/papers/Arad_NTIRE_2022_Spectral_Recovery_Challenge_and_Data_Set_CVPRW_2022_ Data Download: https://github.com/boazarad/ARAD_1K Winner github repo here with pytorch model: https://github.com/caiyuanhao1998/MST-plus-plus?tab=readme-ov-file Goal: Reproduce winning paper #3(ii) Spectral Waste Dataset We again reuse SpectralWaste: https://github.com/ferpb/spectralwaste-segmentation But now we change how we use the data. Original setup: Inputs:256 ×256 ×3 RGB 256 ×256 ×224 spectral (aligned to RGB) New setup: Inputs:256 ×256 ×3 RGB Outputs:256 ×256 ×224 spectral (aligned to RGB) So we train a model to predict the full spectral cube from RGB alone. This is essentially within-image self-supervised learning: “Predict the occluded from the visible”– analogous to masked language modeling for LLMs Key points: No manual labeling is required. You can simply run a hyperspectral +RGB setup above a conveyor and record data continuously. Limitation: This does not directly give us material / object type / instance labels. However, it follows the GPT-style paradigm:Self-supervised pretraining (RGB →spectra). This is then supervised fine-tuning for material / object / instance prediction Goal: Phase 1 –Pretraining within the image Inputs:256 ×256 ×3 RGB Outputs (prediction):256 ×256 ×224 spectral (predicted) Labels (ground truth):256 ×256 ×224 spectral (measured) Phase 2 –Downstream task Use the pretrained features to try to beat the RGB-only benchmark on material/object/instance prediction. Pretraining allows us to use the entire multimodal dataset (7,655 RGB +spectral image pairs), not just the 852 labeled examples #3(iii) Spectral Waste Dataset Zero Waste + Spectral Waste Phase 1 -Pretraining within image (Spectral Waste) Phase 2 -Training on labels (Spectral Waste) Phase 3 -Training on labels (Zero Waste) This represents the entire workflow. The only difference is the zero waste labels here are provided by humans but in our deployment would be provided by the hyperspectral oracle Goal: Try to achieve the highest score of any model

Programming Language(s):
Python.

Hardware/Software Requirements:
Laptop/personal computer.

项目 ID：
1189

公司：BA
M Robotics

项目领域：空

公司简介：
BAM（拆解与制造）机器人是一家位于温哥华的初创公司，致力于开发低成本、由人工智能驱动的机器人，能够以人类般的灵巧性以及机器般的速度和可靠性对混合废物进行分类。试点应用包括与不列颠哥伦比亚省的一家医疗废物聚合商合作分类医疗废物。公司的长期愿景是为循环经济开发一种模块化机器人系统，能够执行“制造”（包括组装）和各种形式的“拆解”（包括分类和拆卸）。联合创始人兼首席执行官/首席技术官 Zach Yamaoka：- 英国初创企业 Automata 产品团队成员（已融资 6000 万美元用于开发低成本机械臂）- 戴森新产品质量导入（NPI）机器人工程师 - 两家成功医疗器械技术公司的创始人（Ambience PPE 和 D.future）- 奥迪自动驾驶汽车杯软件工程师，帝国理工学院机器人智能实验室 联合创始人兼运营总监 Anna Yamaoka：- 纽约州执业律师 - Urbanlogiq 和 Guarnini 全球法律与科技研究员 - 牛津大学法学一等荣誉学位及知识产权法奖

项目描述：
在回收和废物处理设施中实现精确的物体检测仍是一个开放性难题。典型问题包括场景杂乱、部分遮挡、污垢与污染、物体形变（压碎、折叠、撕裂）以及视觉上相似的材料（例如塑料与玻璃，或外观相同但种类不同的塑料）。高光谱成像旨在通过捕捉宽波长范围（而不仅仅是RGB）的场景信息来提供更可靠的物体检测。尽管物体在仅有的3个RGB通道中看起来非常相似，但它们在多个波长下通常具有独特的光谱特征。由于高光谱特征与材料化学性质相关，因此对杂乱、遮挡和形变具有更强的鲁棒性。（例如，无论你如何压碎一个PET瓶，其光谱特征仍然表明它是塑料。）高光谱相机本身并不会直接输出“材料 =PET”或“物体 = 瓶子”，它仅返回每个波长下的强度值。随后需训练有监督的机器学习模型，将这些光谱特征映射到目标标签（如材料类型、物体类别等）。高光谱相机的主要缺点是成本高昂。对于短波红外（SWIR）高光谱相机，我们收到的报价在2万至5万美元之间。在我们的设计中，使用许多小型机械臂，每个机械臂在传送带上每分钟执行~60 次抓取操作。为了匹配一台价值20万美元的大型光学分拣机的吞吐量，我们可以部署总共约花费2万美元的~6 个小机械臂。采用这种分布式方法时，每个小机械臂都配备自己的相机。挑战在于，为每个机械臂都配备独立的高光谱相机将极其昂贵，并且违背了我们开发低成本机器人解决方案的目标。因此，我们的目标是仅使用成本更低的RGB相机，达到与高光谱系统相当的性能。换句话说：我们如何仅利用3个RGB通道，预测出与高光谱相机相同的输出结果（材料、产品类型及像素级实例）？我们的思路是：将高光谱相机作为“更高知识”的oracle，训练一个仅使用RGB数据即可预测相同标签的模型，并以高光谱模型的预测结果作为监督信号。我们正在采购一台高光谱相机和一台RGB相机。我们将以Spectral Waste论文及其数据集作为起点：https://arxiv.org/abs/2403.18033 学生挑战：我们希望研究若干相关的子问题和数据集。#1 - RGB + 光谱 → 材料/物体/实例 Spectral Waste 论文及基线模型：GitHub：https://github.com/ferpb/spectralwaste-segmentation Kaggle：https://www.kaggle.com/datasets/vijaynyayavn/spectralwaste 目标：复现 Spectral Waste 论文中 RGB +HYPER 的结果。#2 - RGB → 材料/对象/实例 #2(i) Spectral Waste 数据集 我们重复使用 SpectralWaste 数据集：- https://github.com/ferpb/spectralwaste-segmentation ……但这次我们仅使用 RGB 图像 目标：复现论文中 RGB 的结果 #2(ii) Zero Waste 数据集 从此处下载：Zero waste 数据集：https://ai.bu.edu/zerowaste/ Zero waste v2 数据集：https://github.com/dbash/visda2022-org 目标：复现论文结果 #2(iii) Zero Waste 数据集 + Spectral Waste 目标：合并两个数据集并尝试取得更优的结果 一个有趣的挑战是，光谱 RGB 是线扫描仪，而 zero waste 是面扫描仪（这在下面的注释中有说明） #3 - RGB → Spectral #3(i) NTIRE 2022 光谱恢复挑战赛 概述论文：https://openaccess.thecvf.com/content/CVPR2022W/NTIRE/papers/Arad_NTIRE_2022_Spectral_Recovery_Challenge_and_Data_Set_CVPRW_2022_ 数据下载：https://github.com/boazarad/ARAD_1K 冠军 GitHub 仓库地址，包含 PyTorch 模型：https://github.com/caiyuanhao1998/MST-plus-plus?tab=readme-ov-file 目标：复现冠军论文 #3(ii) 光谱垃圾数据集 我们再次使用 SpectralWaste：https://github.com/ferpb/spectralwaste-segmentation 但现在我们改变了数据的使用方式。原始设置：输入：256 ×256 ×3 RGB 256 ×256 ×224 光谱（与 RGB 对齐）新设置：输入：256 ×256 ×3 RGB 输出：256 ×256 ×224光谱（与 RGB 对齐）因此我们训练一个模型，仅从 RGB 预测完整的光谱立方体。这本质上是图像内的自监督学习：“从可见部分预测被遮挡部分”——类似于大语言模型中的掩码语言建模 关键点：无需人工标注。你只需在传送带上运行高光谱 +RGB 装置并持续记录数据即可。局限性：这不能直接提供材料/物体类型/实例标签。然而，它遵循 GPT 式范式：自监督预训练（RGB →光谱）。然后进行有监督微调以实现材料/物体/实例预测 目标：第一阶段——图像内预训练 输入：256 ×256 ×3 RGB 输出（预测）：256 ×256 ×224 光谱（预测结果） 标签（真实值）：256 ×256 ×224 光谱（测量值） 第二阶段——下游任务 使用预训练特征尝试在材料/物体/实例预测任务上超越仅使用 RGB 的基准。预训练使我们能够利用整个多模态数据集（7,655 对 RGB +光谱图像），而不仅仅是 852 个带标签样本 #3(iii) 光谱垃圾数据集 零废弃 + 光谱垃圾 第一阶段 - 图像内预训练（光谱垃圾） 第二阶段 - 基于标签训练（光谱垃圾） 第三阶段 - 基于标签训练（零废弃） 这代表了完整的流程。唯一的区别在于，这里的零废弃标签由人工提供，而在我们的部署中将由高光谱“先知”提供 目标：尝试达到任意模型中的最高得分

编程语言：
Python。

硬件/软件要求：
笔记本电脑/个人计算机。

Current Work/Arrangement:
Zach Yamaoka is in charge of technical development (hardware and software) and would work directly with students.

Previous Project?:
no

当前工作/安排：
Zach Yamaoka 负责技术开发（硬件和软件），并将直接与学生合作。

以前的项目：
no

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https://issp.bcit.ca/student_catalogue?category=Comp+3800+Burnaby&year=2026&term=Winter&type=Generate+Student+Catalogue 24/31

Project ID:
1192

Company:
Center for Applied Second Language Studies / University of Oregon

Project Areas:
Web Development,Mobile Development,Games,AR/VR,Machine Learning/Algorithms/Research

Company Profile:
The Center for Applied Second Language Studies (CASLS) at the University of Oregonsupports innovative world language teaching and learning. We develop research-based curricula, professional development resources, and assessments to support infrastructure and innovation. We are one of sixteen National Foreign Language Resource Centers that work to increase the nation's capacity for language education. Our resources incorporate best practices in pedagogy, the latest in second language acquisition research, and technology that's actually usable in the classroom.

Project Description:
The VAuLT platform is a no-code mixed-reality toolkit developed at the Center for Applied Second Language Studies (CASLS). It allows users to build place-based, interactive experiences—escape rooms, scavenger hunts, cultural site activations, and other narrative-driven XR interactions—without advanced technical skills. What the Project Is Doing: We are upgrading VAuLT by developing a new cross-platform front-end (Unity or web-based) that connects to the existing back-end. This will make the system more accessible, more flexible, and better suited for educational and community storytelling projects. Students involved in this project will: Build and test components of the new front-end interface. Integrate front-end prototypes with an already-functioning back-end. Strengthen UI/UX, navigation, and interaction design for mixed-reality experiences. Participate in short design cycles to refine functionality through hands-on testing. What Makes VAuLT Interesting Active back-end + real use cases: You are not starting from scratch; you're extending a working system. Mixed-reality design without heavy asset pipelines: The platform uses templates rather than complex 3D modeling, so engineering work focuses on interaction logic, not graphics. Immediate impact: Your work directly affects how educators, students, and community partners build XR experiences.

Programming Language(s):
Swift, PHP, HTML & CSS, JavaScript

Hardware/Software Requirements:
iPhone running iOS 18 or newer. Web browser

Current Work/Arrangement:
Student involvement will focus on advancing the process by prototyping both a Unity-based and a web-based front end, testing their connection to the existing back-end, and helping move the project from stalled prototypes into an active development cycle.

Previous Project?:
no

项目 ID：
1192

公司：
应用第二语言研究中心 / 俄勒冈大学

项目领域：
网页开发,移动开发,游戏,增强现实/虚拟现实,机器学习/算法/研究

公司简介：
俄勒冈大学应用第二语言研究中心（CASLS）致力于推动创新型世界语言教学与学习。我们开发基于研究的课程、教师专业发展资源和评估工具，以支持语言教育体系的建设与创新。我们是十六个国家外语资源中心之一，旨在提升国家在语言教育方面的能力。我们的资源融合了教学法的最佳实践、第二语言习得研究的最新成果，以及真正可在课堂中使用的科技。

项目描述：
VAuLT 平台是由应用第二语言研究中心（CASLS）开发的一款无需编程的混合现实工具包。它允许用户在无需高级技术技能的情况下，创建基于地点的互动体验——例如密室逃脱、寻宝游戏、文化场所互动激活以及其他叙事驱动的扩展现实（XR）交互。项目当前工作内容：我们将通过开发新的跨平台前端（Unity 或基于网页）并与现有后端连接，对 VAuLT 进行升级。这将使系统更具可访问性、更灵活，并更适用于教育和社区叙事项目。参与本项目的学生将：构建并测试新前端界面的组件；将前端原型与已正常运行的后端进行集成；强化混合现实体验中的用户界面/用户体验、导航及交互设计；参与短周期的设计迭代，通过动手测试不断优化功能。VAuLT 的独特之处 活跃的后端 + 真实使用场景：你并非从零开始，而是在一个已有系统的基础上进行扩展。无需复杂资源流程的混合现实设计：该平台采用模板化方式，而非复杂的 3D 建模，因此工程重点在于交互逻辑，而非图形渲染。即时影响力：你的工作将直接影响教育工作者、学生及社区合作伙伴构建 XR 体验的方式。

编程语言：
Swift、PHP、HTML 和 CSS、JavaScript

硬件/软件要求：
运行 iOS 18 或更高版本的 iPhone。网络浏览器

当前工作/安排：
学生参与的重点将是推进该流程，通过构建基于Unity和基于Web的前端原型，测试它们与现有后端的连接，并协助将项目从停滞的原型阶段推进到活跃的开发周期。

先前的项目？：
no

Project ID:
1200

Company:
Client: Conscious Connections Network (Inc. Pending)

Project Areas:
DevOps,Web Development,Mobile Development

Company Profile:
Conscious Connections Network (under Agora Network Technologies Inc.) builds technology that supports healthier, more intentional relationships. Our products combine modern psychology, AI-assisted communication tools, and elegant app design to help individuals and couples understand themselves, communicate better, and form meaningful connections. Agora, our parent organization, has sponsored 10+ successful BCIT ISSP projects across AI, recommender systems, and full-stack app development. Conscious Connections expands this work into the dating and relationship wellness space through tools like compatibility algorithms, guided communication experiences, and soon, an AI-supported conflict resolution platform. Our mission is to create emotionally intelligent technology that strengthens human connection, promotes self-awareness, and empowers people to build relationships with depth, intention, and compassion.

Project Description:
Notion Doc: https://fallacious-ozraraptor-f59.notion.site/AI-Assisted-Conflict-Resolution-Tool-2c2ee584d2ee80a59701c6948350232d?source=copy_link **Client:** Conscious Connections Network (Inc. Pending) *(owner of Agora Network Technologies Inc.)* **Project:** Conscious Connections: AI-Assisted Conflict Resolution Tool (Web + Mobile Monorepo) --- ### **Client** **Conscious Connections** is a values-based dating and relationship platform focused on intentional, emotionally intelligent partnership. It sits under the broader **Agora Network Technologies** umbrella, which has sponsored 10+ successful BCIT ISSP projects across recommender systems, computer vision, and app feature development. Conscious Connections already has: - A working **Next.js/TypeScript** codebase. - A v1 **matching algorithm** and survey system (previous ISSP term). - A clear product vision around **healthy relationships**, not just swiping and casual dating. The next major evolution is to support **existing couples** (and early-stage relationships) with tools that improve **communication, conflict resolution, and nervous system safety**—using AI as a coach, translator, and gentle facilitator. This ISSP project will design and build the first version of the **Conscious Connections Conflict Resolution Tool**: a shared, AI-assisted chat space that helps couples fight less destructively, understand each other more deeply, and de-escalate conflict through guided communication. --- ### **Project Title** **Conscious Connections: AI-Assisted Conflict Resolution Tool (Web + Mobile Monorepo)** --- ### **Overview** Most couples never learned how to fight well. Arguments spiral, old wounds get triggered, and the conversation becomes about *winning* instead of understanding. Conscious Connections wants to change that by giving couples a **shared space**—think “therapist in the chat”—where: - Each partner can express themselves honestly. - An AI “therapist” helps **clean up** heated messages before they’re sent. - The system can gently **call out patterns**, suggest more constructive language, and highlight emotional needs in real time or on demand. This ISSP term is focused on building the **core technical foundation**: 1. A **Turborepo-style monorepo** with: - **Expo React Native app** (primary client). - **Next.js web app** (secondary client + API server). - Shared **TypeScript models, UI primitives, and OpenAI utilities**. 2. A secure, scalable **authentication and subscription system** using **Clerk** for auth (with the understanding that there may be an ongoing discussion with the client/program about long-term auth strategy) and **Stripe** for couple-based billing. 3. A **real-time chat system** (WebSockets) where two partners can converse in a shared “relationship room.” 4. A structured **intake and history system** that builds a psychological profile for each user and relationship—forming the foundation for AI context and coaching. 5. Initial **AI-assisted conflict resolution features**: - “Clean My Message” (rewrite heated text into compassionate, clear language). - On-demand **therapist-style reflections** on a conversation thread. The term is designed into **4–5 main modules**, with one or two students owning a core “thread” while collaborating at integration points. --- ### **Your Opportunity** This project sits at the intersection of: - **Full-stack engineering** (Next.js, Expo, monorepo architecture, WebSockets). - **Applied AI** (OpenAI integration, prompt design, context management). - **Relationship psychology** (communication patterns, conflict repair, emotional safety). As a member of this ISSP team, you will: - Set up a **real monorepo** that supports *both* web and mobile apps. - Implement **real-time communication** with persistent message history. - Work with **auth, subscriptions, and partner linking** (two accounts sharing one “relationship space”). - Build the first version of tools that could genuinely **help couples fight better**. - Ship **polished MVP features**, not just prototypes, under the guidance of an experienced founder/CTO. This is production-oriented work: your code will form the foundation of a product that Conscious Connections intends to put into people’s hands. --- ### **Project Goals** **Objective:** Deliver a **polished MVP** of the Conscious Connections Conflict Resolution Tool, built on a **Turborepo monorepo** (Expo + Next.js), with: - Auth, onboarding, and “relationship room” creation. - Structured psychological intake for each partner. - Real-time chat with persistent history. - Initial AI conflict support tools (message clean-up + on-demand reflections). - Subscription logic for couple-based billing. Each student will be assigned a **primary thread** after the opening meeting, based on interests and strengths. Threads are designed to be modular but interconnected. --- ### **Thread 1: Monorepo Architecture & Core Infrastructure** **Goal:** Establish a stable, scalable **monorepo** that hosts both the web and mobile clients plus shared libraries. **Responsibilities:** - Set up a **Turborepo** (or similar) with: - `apps/web` → **Next.js** (web app + API routes). - `apps/mobile` → **Expo React Native** app. - `packages/ui` → Shared components (where feasible). - `packages/core` → Shared types, validation schemas, and domain logic. - `packages/api-client` → Shared API clients/hooks. - Configure: - TypeScript project references. - ESLint/Prettier. - Basic testing setup (e.g., Jest or Vitest). - Environment variable handling across apps. - Ensure developers can: - Run web + mobile concurrently in dev. - Share interfaces and models across both clients. - Consume the same backend (`Next.js` API routes). **Deliverables:** - Monorepo with documented structure and setup instructions. - Dev scripts for running: - `web` (Next.js dev server). - `mobile` (Expo dev). - Shared types for: - `User`, `Relationship`, `Message`, `IntakeQuestion`, `IntakeAnswer`, etc. - Basic CI workflow (lint + tests) for GitHub. --- ### **Thread 2: Authentication, Onboarding & Relationship Linking** **Goal:** Implement secure **user authentication**, **onboarding flows**, and **relationship linking**—allowing two separate user accounts to share one conflict-resolution “room.” **Responsibilities:** - Integrate **Clerk** for auth across: - Next.js web app. - Expo React Native app. *(With the understanding that there may be an ongoing discussion with the client/program about the long-term auth provider; implementation should be modular and well-structured.)* - Implement user onboarding flows: - Account creation (email or

项目 ID：
1200

公司：
客户：Conscious Connections Network（注册中）

项目领域：
DevOps，网页开发，移动开发

公司简介：
Conscious Connections Network（隶属于 Agora Network Technologies Inc.）致力于构建支持更健康、更有意识人际关系的技术。我们的产品结合现代心理学、AI 辅助沟通工具和优雅的应用程序设计，帮助个人和伴侣更好地了解自己、改善沟通，并建立有意义的联系。我们的母公司 Agora 此前已赞助 **10+** 个成功的 BCIT ISSP 项目，涵盖人工智能、推荐系统和全栈应用开发领域。Conscious Connections 将这一工作拓展至约会和关系健康领域，通过兼容性算法、引导式沟通体验，以及即将推出的 AI 支持的冲突解决平台等工具实现。我们的使命是创造情感智能技术，以加强人际连接，促进自我认知，并帮助人们建立深刻、有意识且充满同理心的关系。

项目描述：
Notion 文档：https://fallacious-ozraraptor-f59.notion.site/AI-Assisted-Conflict-Resolution-Tool-2c2ee584d2ee80a59701c6948350232d?source=copy_link **客户：** Conscious Connections Network（注册中）*(Agora Network Technologies Inc. 的所有者)* **项目：** Conscious Connections：AI 辅助冲突解决工具（Web + Mobile 单体仓库） --- ### **客户** Conscious Connections 是一个以价值观为基础的约会和关系平台，专注于有意识、情感智能的伴侣关系。它隶属于更广泛的

Agora Network Technologies 旗下，该机构已赞助过多个在推荐系统、计算机视觉和应用功能开发方面的成功 BCIT ISSP 项目。Conscious Connections 已具备： - 一个可用的 **Next.js/TypeScript** 代码库。 - 一个 v1 版本的**匹配算法**和问卷系统（上一个 ISSP 学期完成）。 - 一个围绕**健康关系**而非仅滑动匹配和随意约会的清晰产品愿景。下一个重大演进是为**现有情侣**（以及初期关系）提供支持工具，以改善**沟通、冲突解决和神经系统安全感**——将 AI 用作教练、翻译员和温和的引导者。本次 ISSP 项目将设计并构建首个版本的 **Conscious Connections 冲突解决工具**：一个共享的 AI 辅助聊天空间，帮助情侣减少破坏性争吵，更深入地理解彼此，并通过引导式沟通实现冲突降级。 --- ### **项目标题** **Conscious Connections：AI 辅助冲突解决工具（Web + Mobile 单体仓库）** --- ### **概述** 大多数情侣从未学会如何有效地争吵。争论迅速升级，旧伤被触发，对话变成关于“赢”而不是理解。Conscious Connections 希望通过为情侣提供一个**共享空间**来改变这一现状——可以理解为“聊天中的治疗师”，在这个空间中： - 每位伴侣都可以坦诚表达自己。 - AI “治疗师”可在消息发送前帮助**净化**激烈言辞。 - 系统可温和地**指出互动模式**，建议更具建设性的语言，并实时或按需突出情感需求。本 ISSP 学期的重点是构建**核心技术基础**： 1. 采用 **Turborepo 风格的单体仓库**，包含： - **Expo React Native 应用**（主要客户端）。 - **Next.js 网页应用**（次要客户端 + API 服务器）。 - 共享的 **TypeScript 模型、UI 基元和 OpenAI 工具**。 2. 使用 **Clerk** 实现安全可扩展的**身份验证和订阅系统**（需知与客户/项目方可能持续讨论长期认证策略），并使用 **Stripe** 实现基于情侣的计费。 3. 一个**实时聊天系统**（WebSockets），使两位伴侣可以在共享的“关系房间”中交流。 4. 一个结构化的**用户信息采集与历史记录系统**，为每位用户及双方关系建立心理档案——为 AI 提供上下文和辅导的基础。 5. 初始的**AI 辅助冲突解决功能**： - “净化我的消息”（将激烈文字重写为富有同理心且清晰的语言）。 - 按需对对话线程进行**治疗师风格的反思反馈**。 本学期项目划分为 **4–5 个主要模块**，每位一到两名学生负责一个核心“任务线”，并在集成点协作。 --- ### **你的机会** 此项目处于以下领域的交汇点： - **全栈工程**（Next.js、Expo、单体仓库架构、WebSockets）。 - **应用型 AI**（OpenAI 集成、提示词设计、上下文管理）。 - **关系心理学**（沟通模式、冲突修复、情感安全）。作为本 ISSP 团队的一员，你将： - 搭建一个支持 ** 网页和移动应用 ** 的真实单体仓库。 - 实现带有持久消息历史的 ** 实时通信 **。 - 处理**身份验证、订阅和伴侣绑定**（两个账户共享一个“关系空间”）。 - 构建首批真正能**帮助情侣更好争吵**的工具。 - 在经验丰富的创始人/CTO 指导下，交付**完善的 MVP 功能**，而不仅仅是原型。 这是一项面向生产环境的工作：你的代码将成为 Conscious Connections 计划推向市场的实际产品的基石。 --- ### **项目目标** **目标：** 交付一个**完善 MVP 版本**的 Conscious Connections 冲突解决工具，基于 **Turborepo 单体仓库**（Expo + Next.js），包含： - 身份验证、用户引导及“关系房间”创建。 - 每位伴侣的结构化心理信息采集。 - 带有持久历史记录的实时聊天。 - 初始 AI 冲突支持工具（消息净化 + 按需反馈）。 - 支持基于情侣计费的订阅逻辑。 每位学生将在开题会议后根据兴趣和优势被分配一个**主要任务线**。各任务线设计为模块化但相互关联。 --- ### **任务线 1：单体仓库架构与核心基础设施** **目标：** 建立一个稳定、可扩展的**单体仓库**，托管网页和移动客户端以及共享库。 **职责：** - 搭建 **Turborepo**（或类似方案），包含： - `apps/web` → **Next.js**（网页应用 + API 路由）。 - `apps/mobile` → **Expo React Native** 应用。 - `packages/ui` → 共享组件（尽可能复用）。 - `packages/core` →共享类型、验证模式和领域逻辑。 - `packages/api-client` → 共享 API 客户端/钩子。 - 配置： - TypeScript 项目引用。 - ESLint/Prettier。 - 基础测试设置（例如 Jest 或 Vitest）。 - 跨应用的环境变量处理。 - 确保开发者能够： - 在开发环境中同时运行网页 + 移动应用。 - 在两个客户端之间共享接口和模型。 - 调用同一后端（`Next.js` API 路由）。 **交付成果：** - 包含文档化结构和搭建说明的单体仓库。 - 用于运行以下服务的开发脚本： - `web`（Next.js 开发服务器）。 - `mobile`（Expo 开发环境）。 - 共享类型定义，包括： - `User`, `Relationship`, `Message`, `IntakeQuestion`,`IntakeAnswer` 等。 - 基础 CI 工作流（lint + tests）用于 GitHub。 --- ### **任务线 2：身份验证、用户引导与伴侣绑定** **目标：** 实现安全的**用户身份验证**、**引导流程**和**伴侣绑定**——允许两个独立用户

账户共享一个冲突解决“房间”。**职责：** - 集成 **Clerk** 实现以下平台的认证： - Next.js 网页应用。 - Expo React Native 应用。（需知客户/项目方可能仍在讨论长期使用的认证提供商；实现时应保持模块化和良好结构。） - 实现用户引导流程： - 账户创建（通过邮箱或

OAuth, depending on configuration). - Basic profile setup (name, pronouns, relationship status, etc.). - Implement “relationship workspace” mechanics: - User A creates a **new relationship** and invites User B via email. - User B accepts invite, creates/logs into account. - Both accounts are then linked to a shared `Relationship` record. - Define subscription logic using **Stripe**: - At MVP: one subscription per relationship. - Support flows like: - One partner pays for both. - Ability to later support split billing (design schema; full UX may be a stretch goal). **Deliverables:** - Auth working in both web and mobile clients. - Relationship model with: - `Relationship`, `RelationshipMembership` tables (Prisma). - Invite/join flow for partners (at least implemented on web; mobile is a plus). - Basic subscription check (e.g., `relationship.isActive`) enforced before chat features are enabled. --- ### **Thread 3: Intake & Psychological History System** **Goal:** Create a **structured intake system** that gathers key psychological and relational background for each user and relationship—forming the base “memory” that AI can draw from later. **Responsibilities:** - Design a flexible **JSON-driven question schema**: - Supports question types like: - Text input. - Multi-select / checklists. - Themes include: - Early childhood dynamics (caregivers, emotional climate). - Socioeconomic background. - Experiences like bullying, eating disorders, adoption, etc. - High-level attachment or conflict patterns (non-diagnostic language). - Implement intake flows in: - Web app (primary). - Mobile app (basic version, if time permits). - Store responses in Prisma models such as: - `UserIntakeProfile` - `IntakeAnswer` (per-question answers). - Implement a function to compile a user’s intake into a single **summary object** or text block that can later be used as AI context (e.g., in an OpenAI “profile” file or internal long-term context store). **Deliverables:** - Prisma schema and migrations for intake data. - Frontend UI for completing intake (web, mobile if feasible). - Validations and basic UX safeguards (save progress, etc.). - Documentation on how this data will be used by later AI components. --- ### **Thread 4: Real-Time Chat & AI-Assisted Conflict Tools** **Goal:** Build the **real-time chat experience** between two partners and integrate initial **AI conflict resolution tools**. **Responsibilities:** - Implement a **conversation model**: - `Message` table with: - `relationshipId` - `senderUserId` - `content` - `createdAt` - `messageType` (e.g., `user`, `ai_reflection`, `ai_rewrite_suggestion`). - Implement **real-time messaging** using WebSockets: - Likely via: - Vercel’s WebSocket support, or - Socket.IO, or - Pusher (depending on constraints). - Ensure: - New messages appear in real-time for both partners. - Messages are persisted to the DB. - Build the chat UI: - Shared room view for a relationship. - Message list, input bar, typing indicator (optional stretch). - Implement initial AI tools using OpenAI: 1. **“Clean My Message” Tool** - User types a raw, emotional message. - AI rewrites it into: - Non-accusatory - Specific, emotionally honest - Non-hostile, but still clear. - User can then send the AI-refined version. 2. **On-Demand Therapist Reflection** - User or couple taps a button like “Get Reflection.” - Backend sends recent segment of conversation + high-level intake summary to OpenAI. - Returns: - Observations about patterns. - Gentle coaching (what each partner may be feeling, suggestions for repair attempts, etc.). - AI appears as a third voice (“Therapist” or “Guide”) in the chat. - Ensure **safety and clarity**: - Make it visually obvious which messages are AI-generated. - Do *not* let AI speak *as* one of the partners. **Deliverables:** - Web-based chat UI working end-to-end (real-time + persistence). - Basic AI endpoints: - `/api/ai/clean-message` - `/api/ai/reflection` - At least one “happy-path” flow demonstrated: - Two logged-in users in the same relationship. - They chat. - One uses “Clean My Message.” - They request an AI reflection. --- ### **Stretch Goals (If Time Allows)** - Therapist “live in the room” mode where AI periodically interjects automatically (e.g., every X messages). - More sophisticated context management for AI (e.g., conversation summarization and memory). - Mobile parity for all major features (full chat + intake on Expo). - Expanded Stripe flows (split billing, plan tiers). --- ### **Technology Stack** - **Frontend / Clients:** - **Next.js** (TypeScript) for web app and API routes. - **Expo React Native** for mobile client. - **Tailwind CSS** (web) and shared design tokens where possible. - **Monorepo & Tooling:** - **Turborepo** (or similar) for monorepo management. - TypeScript project references, ESLint, Prettier, Jest/Vitest. - **Auth & Identity:** - **Clerk** for authentication and session management across web and mobile, with the understanding that there may be an ongoing discussion about auth provider choice long-term. - **Backend & Data:** - Next.js **API routes** for REST endpoints and AI features. - **Prisma** ORM with **PostgreSQL**. - **Real-Time Messaging:** - WebSockets via a suitable service (e.g., Vercel WebSockets, Pusher, or Socket.IO) integrated with Next.js. - **Payments:** - **Stripe** for subscriptions (relationship-level billing). - **AI:** - **OpenAI API** for: - Message rewriting / tone transformation. - Therapist-style reflections. - **DevOps & Hosting:** - Web: **Vercel** for Next.js. - Mobile: Expo workflow. - DB & ancillary services: existing Agora/Conscious Connections infrastructure (Postgres on cloud). --- ### **Mentorship & Support** You’ll be working directly with: - **Taylor Aucoin** – Founder & CTO, Conscious Connections / Agora Network Technologies - Role: **Product & Technical Lead** - Responsibilities: - Define product behaviors and acceptance criteria. - Provide architecture guidance (monorepo layout, DB modeling, AI integration patterns). - Weekly check-ins and code review support. - Write ClickUp-style tickets and implementation notes. You will also have: - Access to **existing Conscious Connections codebases** (Next.js, Prisma, etc.). - Prior ISSP documentation and patterns used successfully in Agora projects. - Slack/Discord channel for async questions and guidance. --- ### **Expectations for Students** - **Prerequisites:** - Comfortable with **JavaScript/TypeScript** and **React**. - Some familiarity with backend concepts (APIs, databases). - Interest in working with AI APIs is a plus. - **Ownership:** - Each student will own a **primary thread** (see above) but is expected to collaborate where threads intersect. - You’ll be responsible for your part from **design to implementation to documentation**. - **Collaboration & Communication:** - Weekly calls for status updates, questions, and architecture decisions. - Active communication in Slack: ask for help early, surface blockers, share progress. - **Quality & Delivery:** - Code should be: - Typed (TypeScript). - Reasonably tested (happy-path tests at minimum). - Documented (README updates, inline comments where logic is non-obvious). - Target: **polished MVP**, deployable and usable in a test/staging environment by end of term. --- ### **Closing Statement** This project is about more than building a chat app. It’s about giving couples a safer way to handle some of the hardest moments in their relationship—when they’re hurt, triggered, or afraid. By combining **solid engineering**, **clean architecture**, and **thoughtful AI design**, you’ll help build a tool that can actually reduce harm and increase understanding between real people. You’ll leave with experience in: - Monorepos and multi-platform architecture. - Real-time systems and WebSockets. - Auth + subscription flows in a production-style environment. - AI-assisted UX for emotionally sensitive contexts. If you’re excited to build something technically interesting **and** deeply human, this is your chance to help shape the first generation of AI-supported conflict resolution for conscious relationships.

Programming Language(s):

The project will primarily use TypeScript across all components. The web application and backend API will be built with Next.js (TypeScript), while the mobile application will use React Native via Expo (TypeScript). Additional technologies include Prisma (TypeScript) for database access and WebSocket libraries for real-time communication. If AI integration is implemented, it will use TypeScript-based server endpoints that interact with the OpenAI API.

Hardware/Software Requirements:

Students will need access to a standard development laptop capable of running modern JavaScript tooling (Node.js, TypeScript, Expo).

OAuth，根据配置决定）。 - 基本资料设置（姓名、代词、关系状态等）。 - 实现“关系工作区”机制： - 用户 A 创建一个新的**关系**，并通过电子邮件邀请用户 B。 - 用户 B 接受邀请，创建/登录账户。 - 两个账户随后关联到一个共享的 `Relationship` 记录。 - 使用 **Stripe** 定义订阅逻辑： - 在 MVP 阶段：每个关系对应一个订阅。 - 支持如下流程： - 一方伴侣为双方付费。 - 支持后续分摊账单的能力（设计数据模式；完整 UX 可能作为延伸目标）。**交付成果：** - 在 Web 和移动端客户端均实现认证功能。 - 关系模型包含： - `Relationship`、`RelationshipMembership` 表（Prisma）。 - 伙伴邀请/加入流程（至少在 Web 上实现；移动端为加分项）。 - 实现基本订阅检查（例如 `relationship.isActive`），在启用聊天功能前进行校验。 --- ### **线索 3：初步评估与心理历史系统** **目标：** 创建一个**结构化的初步评估系统**，用于收集每位用户及其关系的关键心理与关系背景信息——形成 AI 后续可调用的基础“记忆”。 **职责：** - 设计灵活的**基于 JSON 的问题架构**： - 支持如下题型： - 文本输入。 - 多选 / 检查清单。 - 主题包括： - 早年童年动态（照料者、情感氛围）。 - 社会经济背景。 - 校园欺凌、进食障碍、收养等经历。 - 高层次的依恋或冲突模式（使用非诊断性语言）。 - 在以下平台实现评估流程： - 网页应用（主要）。 - 移动端应用（时间允许时实现基础版本）。 - 将回答存储于 Prisma 模型中，例如： - `UserIntakeProfile` - `IntakeAnswer`（每道题的回答）。 - 实现一个函数，将用户的评估内容汇编成单一的 ** 摘要对象 ** 或文本块，供后续作为 AI 上下文使用（例如，在 OpenAI “profile” 文件或内部长期上下文存储中）。**交付成果：** - 初步评估数据的 Prisma 架构及迁移脚本。 - 完成评估的前端 UI（Web，若可行则包含移动端）。 - 验证机制和基础用户体验保障（如保存进度等）。 - 关于此数据如何被后续 AI 组件使用的文档说明。 --- ### **线索 4：实时聊天与 AI 辅助冲突工具** **目标：** 构建两位伴侣之间的**实时聊天体验**，并集成初始的**AI 冲突解决工具**。**职责：** - 实现**会话模型**： - `Message` 表包含字段： - `relationshipId` - `senderUserId` - `content` - `createdAt` - `messageType`（例如 `user`、`ai_reflection`、`ai_rewrite_suggestion`）。 - 使用 WebSockets 实现**实时消息传递**： - 可能采用： - Vercel 的 WebSocket 支持，或 - Socket.IO，或 - Pusher（视具体限制而定）。 - 确保： - 新消息对双方伴侣实时可见。 - 消息持久化至数据库。 - 构建聊天 UI： - 关系共享的房间视图。 - 消息列表、输入栏、正在输入提示（可选延伸功能）。 - 使用 OpenAI 实现初始 AI 工具： 1. **“优化我的消息”工具** - 用户输入原始、情绪化的内容。 - AI 将其重写为： - 非指责性 - 具体且情感真诚 - 非敌意但表达清晰。 - 用户可选择发送经 AI 优化后的版本。 2. **按需治疗师式反思** - 用户或伴侣点击“获取反思”按钮。 - 后端将最近的对话片段 + 高层次评估摘要发送给 OpenAI。 - 返回结果包括： - 对互动模式的观察。 - 温和指导（每位伴侣可能的感受、修复尝试建议等）。 - AI 以第三种声音（“治疗师”或“引导者”）出现在聊天中。 - 确保**安全性与清晰度**： - 视觉上明确区分 AI 生成的消息。 - 不允许 AI 代表任一伴侣发言。**交付成果：** - Web 端到端可用的聊天 UI（实时 +持久化）。 - 基础 AI 接口： - `/api/ai/clean-message` - `/api/ai/reflection` - 至少演示一条“理想路径”流程： - 两名已登录用户处于同一关系中。 - 他们进行聊天。 - 其中一人使用“优化我的消息”功能。 - 他们请求一次 AI 反思。 --- ### **延伸目标（若有时间）** - 治疗师“实时在场”模式，AI 可定期自动介入（例如每 X 条消息一次）。 - 更复杂的 AI 上下文管理（例如对话摘要与记忆）。 - 所有主要功能在移动端实现一致性（Expo 上完整的聊天 + 评估功能）。 - 扩展 Stripe 流程（分摊账单、不同订阅等级）。 --- ### **技术栈** - **前端 / 客户端：** - **Next.js**（TypeScript）用于网页应用和 API 路由。 - **Expo React Native** 用于移动端客户端。 - **Tailwind CSS**（Web）并尽可能共享设计标记。 - **Monorepo 与工具：** - **Turborepo**（或类似工具）用于 monorepo 管理。 - TypeScript 项目引用、ESLint、Prettier、Jest/Vitest。 - **认证与身份：** - **Clerk** 用于 Web 和移动端的身份认证与会话管理，同时理解未来可能继续讨论认证提供商的选择。 - **后端与数据：** - Next.js **API 路由**用于 REST 接口和 AI 功能。 - **Prisma** ORM 配合 **PostgreSQL**。 - **实时消息：** - 通过合适的服务（如 Vercel WebSockets、Pusher 或 Socket.IO）结合 Next.js 实现 WebSockets。 - ** 支付： ** - **Stripe** 用于订阅（关系层级计费）。 - **AI：** - **OpenAI API** 用于： - 消息重写 / 语气转换。 - 治疗师风格的反思。 - **DevOps 与托管：** - Web：**Vercel** 托管 Next.js。 - 移动端：Expo 工作流。 - 数据库及其他服务：现有的 Agora/Conscious Connections 基础设施（云上的 Postgres）。 --- ### **导师支持** 你将直接与以下人员合作： - **Taylor Aucoin** – 创始人兼 CTO，Conscious Connections / Agora Network Technologies - 角色：**产品与技术负责人** - 职责： - 定义产品行为和验收标准。 - 提供架构指导（monorepo 结构、数据库建模、AI 集成模式）。 - 每周检查点及代码审查支持。 - 编写 ClickUp 风格的任务单和实现说明。 你还将获得： - 访问现有的 **Conscious Connections 代码库**（Next.js、Prisma 等）。 - 过往 ISSP 文档以及 Agora 项目中已成功应用的模式。 - Slack/Discord 频道用于异步提问和指导。 --- ### ** 对学生的要求 ** - ** 先决条件：** - 熟悉 **JavaScript/TypeScript** 和 **React**。 - 对后端概念（API、数据库）有一定了解。 - 对使用 AI API 感兴趣者优先。 - ** 自主性：** - 每位学生将负责一个 ** 主线任务 **（见上文），但在任务交叉处需协作。 - 你需要对自己负责的部分从 ** 设计到实现再到文档编写**全程负责。 - **协作与沟通：** - 每周召开会议进行状态更新、提问和架构决策。 - 在 Slack 中积极沟通：尽早寻求帮助、暴露阻塞问题、分享进展。 - **质量与交付：** - 代码应做到： - 类型化（TypeScript）。 - 有合理测试（至少覆盖理想路径）。 - 有适当文档（更新 README，逻辑复杂处添加内联注释）。 - 目标：**完善的 MVP**，可在测试/预发布环境中部署并使用，学期结束前完成。 --- ### **结语** 此项目的意义远不止于构建一个聊天应用。它旨在为伴侣提供一种更安全的方式来应对关系中最艰难的时刻——当他们受伤、被触发或感到恐惧时。通过结合**扎实的工程实践**、**清晰的架构设计**以及**深思熟虑的 AI 设计**，你将帮助打造一款真正减少伤害、增进真实个体之间理解的工具。你将收获的经验包括： - Monorepo 与跨平台架构。 - 实时系统与 WebSockets。 - 生产级环境中的认证 + 订阅流程。 - 面向情感敏感场景的 AI 辅助用户体验设计。 如果你渴望构建一个技术上有挑战性且充满人文关怀的项目，那么这正是你参与塑造第一代面向有意识关系的 AI 辅助冲突解决工具的机会。

编程语言：

该项目的所有组件将主要使用 TypeScript。Web 应用程序和后端 API 将使用 Next.js（TypeScript）构建，而移动应用程序将通过 Expo（TypeScript）使用 React Native。其他技术包括用于数据库访问的 Prisma（TypeScript）以及用于实时通信的 WebSocket 库。如果实现 AI 集成，则将使用基于 TypeScript 的服务器端点与 OpenAI API 进行交互。

硬件/软件要求：

学生需要能够使用一台可运行现代 JavaScript 工具（Node.js、TypeScript、Expo）的标准开发笔记本电脑。

No specialized hardware is required. Software requirements include: • Node.js (LTS version) • TypeScript • Next.js for the web application and backend API • Expo / React Native for the mobile app • Prisma ORM and access to a PostgreSQL database • GitHub for version control • Vercel CLI (optional, for deployment) • Stripe developer tools (for subscription integration) • Clerk developer account (authentication) • OpenAI API access (for AI-assisted features)

Current Work/Arrangement:
NA

Previous Project?:
no

无需专用硬件。软件要求包括：• Node.js（LTS 版本） • TypeScript • 用于 Web 应用程序和后端 API 的 Next.js • 用于移动应用的 Expo / React Native • Prisma ORM 及对 PostgreSQL 数据库的访问权限 • 用于版本控制的 GitHub • Vercel CLI（可选，用于部署） • Stripe 开发者工具（用于订阅集成） • Clerk 开发者账户（身份验证） • OpenAI API 访问权限（用于 AI 辅助功能）

当前工作/安排：
NA

之前的项目？：
no

Project ID:
1203

Company:
South Arm Technology Services

Project Areas:
Scripting/IT

Company Profile:
South Arm Technology is an IT services company providing cybersecurity, IT management, and business automation services. On IT services side, the focus is to script and automate as much as possible to reduce costs and improve accuracy and efficiency.

Project Description:
1. Executive Summary The objective of this project is to architect and deploy a low-cost, secure, and highly efficient IT management ecosystem. By moving away from traditional, proprietary agent-based Remote Monitoring and Management (RMM) platforms—which often present significant supply-chain security risks—this project utilizes a "secure-by-design" philosophy. The ecosystem will be built primarily on open-source protocols and tools, prioritizing lightweight connectivity, granular observability, and automated security compliance. 2. Project Scope & Technical Components The project is divided into seven core technical pillars: A. Secure Connectivity (Mesh Architecture) Objective: Eliminate reliance on heavy, insecure RMM agents for connectivity. Approach: Deploy a WireGuard-based mesh VPN (e.g., Netbird or Tailscale) across all client endpoints. Technical Detail: The VPN will strictly provide the transport layer (connectivity) without handling authentication/login application layers, ensuring a clear separation of concerns. This establishes a secure, encrypted tunnel to endpoints without the vulnerability surface area of traditional RMM agents. B. Observability & Monitoring Objective: Implement comprehensive system visibility without performance degradation. Approach: Utilize a modern, open-source observability stack focusing on agentless or lightweight-agent architectures. Tooling: Zabbix: For infrastructure status and performance metrics. Vector.dev: For high-performance log and metric aggregation. Graylog: For centralized log management and analysis. C. Patch Management & Software Distribution Objective: Streamline Windows software management and security updates. Approach: Leverage Winget (Windows Package Manager) as the primary engine for software installation and patching. Technical Detail: To ensure package integrity and version control, the team will build and host a Private Winget Repository, allowing for curated and approved software deployment rather than relying solely on public repositories. D. Vulnerability Management Objective: Proactive detection of security risks and CVEs. Approach: Integrate continuous vulnerability scanning into the management ecosystem. Tooling: OpenVAS (Greenbone) will be deployed to regularly scan network endpoints and identify vulnerabilities, outdated configurations, or unpatched services. E. Automation & Orchestration Objective: Achieve a state of "Infrastructure as Code" (IaC) to eliminate manual configuration drift and reduce administrative overhead. Approach: We will combine Ansible for high-level orchestration and configuration management with PowerShell for granular Windows-specific automation. Tooling & Workflow: Ansible: Will serve as the central controller to push "Playbooks" across the WireGuard mesh. It will manage state, enforce configuration standards, and orchestrate complex deployments across multiple endpoints simultaneously. PowerShell: Will be utilized heavily as the execution engine for Windows endpoints. Ansible will trigger PowerShell modules and scripts to handle deep OS-level tasks, registry modifications, and software interactions. F. Remote Support & Access Objective: Provide on-demand remote desktop support while maintaining data sovereignty. Tooling: MeshCentral: For web-based remote management and terminal access. RustDesk: As a high-performance, self-hosted alternative to TeamViewer/AnyDesk. G. Windows Fast Imaging Objective: Enable rapid deployment of new devices and disaster recovery through fast re-imaging services. Approach: Implement a network-based imaging solution that separates the base OS image from driver management to ensure speed and hardware compatibility. Tooling: Microsoft Deployment Toolkit (MDT) & Windows Server: To manage and deploy "Gold" images and task sequences over the network. Vendor-Specific Driver Management: Tools such as Lenovo Vantage (and equivalent commercial Vantage tools for enterprise) will be integrated to automate post-imaging driver updates and firmware management, ensuring hardware is fully optimized immediately after re-imaging.

Programming Language(s):
PowerShell Python

Hardware/Software Requirements:
No specific requirement Azure Virtual Desktop, Github Enterprise, etc, will be provided.

Current Work/Arrangement:
Some components have already used in production environment.

Previous Project?:
no

项目 ID：
1203

公司：
南臂科技服务

项目领域：
脚本/IT

公司简介：
South Arm Technology 是一家提供网络安全、IT 管理和业务自动化服务的 IT 服务公司。在 IT 服务方面，其重点是尽可能通过脚本编写和自动化来降低成本，并提高准确性和效率。

项目描述：
1. 执行摘要 本项目的目标是设计并部署一个低成本、安全且高度高效的IT管理生态系统。通过摒弃传统的专有基于代理的远程监控与管理（RMM）平台——这些平台通常存在重大的供应链安全风险——本项目采用“安全设计”理念。该生态系统将主要基于开源协议和工具构建，优先考虑轻量级连接、细粒度可观测性以及自动化安全合规。2. 项目范围与技术组件 本项目分为七个核心技术支柱：A. 安全连接（网状架构） 目标：消除对笨重且不安全的RMM代理在连接性上的依赖。 方法：在所有客户端终端上部署基于WireGuard的网状VPN（例如Netbird或Tailscale）。 技术细节：该VPN将仅提供传输层（连接性），而不处理身份验证/登录应用层，确保职责分离清晰。这将建立通往终端的安全加密隧道，同时避免传统RMM代理所具有的漏洞攻击面。B. 可观测性与监控 目标：在不造成性能下降的前提下实现全面的系统可见性。 方法：采用现代开源可观测性堆栈，聚焦于无代理或轻量级代理架构。 工具：Zabbix：用于基础设施状态和性能

指标。Vector.dev：用于高性能的日志和指标聚合。Graylog：用于集中式日志管理与分析。C. 补丁管理与软件分发 目标：简化 Windows 软件管理和安全更新。方法：利用
Winget（Windows 包管理器）作为软件安装和补丁管理的主要引擎。技术细节：为确保软件包
完整性和版本控制，团队将构建并托管一个私有 Winget 仓库，从而实现经过筛选和批准的软件部署，而非完全依赖公共仓库。D. 漏洞管理 目标：主动检测安全风险和 CVE。方法：将持续漏洞扫描集成到管理系统中。工具：部署 OpenVAS（Greenbone）以定期扫描网络终端，识别漏洞、过时配置或未打补丁的服务。E. 自动化与编排 目标：实现“基础设施即代码”（IaC），消除手动配置偏差并降低管理开销。方法：我们将结合使用 Ansible 进行高层级编排和配置管理，以及 PowerShell 实现细粒度的 Windows 特定自动化。工具与工作流：Ansible：将作为中央控制器，通过 WireGuard 网状网络推送“Playbook”。它将管理状态、强制执行配置标准，并同时跨多个终端协调复杂部署。PowerShell：将被广泛用作 Windows 终端的执行引擎。Ansible 将触发 PowerShell 模块和脚本，以处理深层操作系统任务、注册表修改以及软件交互。F. 远程支持与访问 目标：在保持数据主权的同时提供按需远程桌面支持。工具：
MeshCentral：用于基于网页的远程管理和终端访问。RustDesk：作为 TeamViewer/AnyDesk 的高性能自托管替代方案。G. Windows 快速镜像 目标：通过快速重新镜像服务实现新设备的快速部署和灾难恢复。方法：实施基于网络的镜像解决方案，将基础操作系统镜像与驱动程序管理分离，以确保速度和硬件兼容性。工具：Microsoft 部署工具包（MDT）与 Windows Server：用于通过网络管理和部署“黄金”镜像及任务序列。厂商特定驱动管理：使用 Lenovo Vantage 等工具

（以及适用于企业的等效商业版 Vantage 工具）将被集成，以实现映像部署后驱动程序更新和固件管理的自动化，确保硬件在重新映像后立即得到充分优化。

编程语言：
PowerShell Python

硬件/软件要求：
无特殊要求，Azure 虚拟桌面、Github Enterprise 等将被提供。

当前工作/安排：
一些组件已在生产环境中使用。

之前的项目？：
no

Project ID:
1206

Company:
British Columbia Institute of Technology - Computing Flexible Learning

Project Areas:
Web Development,Scripting/IT,Other

Company Profile:
The School of Computing and Academic studies: is the largest provincial provider of computing graduates and has the most extensive Part-time Studies computing offering in Western Canada.

Project Description:
Project Title Workflow Automation for Academic Advising and Student Success using Microsoft Power Automate ***Project Description*** This project will design and implement a workflow automation solution using Microsoft Power Automate to streamline academic advising and student success processes within BCIT's Flexible Learning programs. The solution will: - Capture student requests and course planning data via Microsoft Forms. - Store and manage data in SharePoint Lists for structured tracking. - Automate approval workflows for course plans and credential evaluations. - Generate and email standardized documents (e.g., course plans, confirmations) to students and administrators. - Provide real-time notifications in Microsoft Teams for status updates. ***Goals & Expected Outcomes:*** - Reduce manual effort and errors in advising workflows. - Improve turnaround time for student requests. - Deliver a functional Power Automate solution integrated with Microsoft 365 apps (Outlook, Teams, SharePoint). - Provide documentation and a demo for future scalability.

Programming Language(s):
Python, if required

Hardware/Software Requirements:
Microsoft 365 environment (Power Automate, SharePoint, Teams, Outlook). Access to BCIT advising workflows and sample data.

Current Work/Arrangement:
Currently, advising and course planning involve manual email exchanges, document preparation, and status tracking across multiple systems, leading to delays and inefficiencies.

Previous Project?:
no

项目 ID：
1206

公司：
不列颠哥伦比亚理工学院 - 计算机灵活学习

项目领域：
Web 开发, 脚本/IT, 其他

公司简介：
计算与学术研究学院：是全省最大的计算机专业毕业生提供机构，也是加拿大西部提供最广泛的非全日制计算机课程的机构。

项目描述：
项目标题 使用 Microsoft Power Automate 实现学术指导与学生成功的流程自动化 ***项目描述*** 本项目将设计并实施基于 Microsoft Power Automate 的工作流自动化解决方案，以简化 BCIT 灵活学习项目中的学术指导和学生成就相关流程。该解决方案将：- 通过 Microsoft Forms 收集学生的请求和课程规划数据。 - 在 SharePoint 列表中存储和管理数据，以实现结构化跟踪。 - 自动化课程计划和资格评估的审批流程。 - 生成标准化文件（例如，课程计划、确认函）并通过电子邮件发送给学生和管理人员。 - 在 Microsoft Teams 中提供实时状态更新通知。 ***目标与预期成果：*** - 减少指导工作流中的手动操作和错误。 - 提高处理学生请求的响应速度。 - 提供一个与 Microsoft 365 应用（ Outlook 、 Teams 、 SharePoint ）集成的功能性 Power Automate 解决方案。 - 提供文档

以及可用于未来扩展的演示。

编程语言：
如有需要，使用 Python

硬件/软件要求：
Microsoft 365 环境（Power Automate、SharePoint、Teams、Outlook）。可访问 BCIT 咨询工作流程和示例数据。

当前工作/安排：
目前，咨询和课程规划涉及通过多个系统进行手动电子邮件往来、文档准备和状态跟踪，导致延迟和效率低下。

先前项目？：
no

https://issp.bcit.ca/student_catalogue?category=Comp+3800+Burnaby&year=2026&term=Winter&type=Generate+Student+Catalogue 31/31