# ISSP Comp 3800 DTC Excel Catalogue (2025 Winter)

### Project ID:
918

### Company:
BCIT Global Relations Office in School of Business + Media

### Project Areas:
empty

### Company Profile:
The Study Abroad Program in School of Business + Media admits international students who're seeking short-term learning experience in Vancouver. They study at BCIT for 1-2 terms with a customized curriculum of up to 4 courses from different program areas. Profit

### Project Description:
For some visual impressions see also: https://docs.google.com/document/d/1ZiPta5rPp1cLL_7aAPnXAwNzQ4sNhjn0e8O1-jZvENE/edit?usp=sharing Challenges: 1) A lot of manual work when we build students' timetables. We need to copy and paste each course details and CRNs into spreadsheets. 2) Schedule conflicts can easily be overlooked and mistakes happen during copy-and-paste. 3) Hard to keep track of the number of students in courses. We count in spreadsheets but, again, it is very manual so mistakes happen. Expectations: CIT students have built a simple visualized scheduler on AWS. We want to improve it, and bring the monthly cost down if possible. 1. Optimize the front-end - Show number of seats available/left instead of “no groups available” - Remove student email - Show start and end date by hovering over the course block - Clickable name to link to student’s timetable page - Download of completed schedule data not working 2. Optimize the back-end - Add space in the course code - Allow editing course selection and student details after creating a profile - Remove features of “Replace Student Data” and “Update Student Data” Goal: Improve efficiency and minimize mistakes

### Programming Language(s):
No Preference

### Hardware/Software Requirements:
Should be compatible with both Windows and IOS

### Current Work/Arrangement:
Currently, we extract course information from Banner and Cognos and manually compare course offerings, copy and paste them into spreadsheet to build a table.

### Previous Project?:
no

## Project ID:
947

## Company:
Perfomance Solutions

## Project Areas:
Mobile Development

## Company Profile:
Performance Solutions is an Innovation based technology company that seeks to commercialize niche products in growing and mature industries.

## Project Description:
Project Plan: Baseball Player Evaluation App for Minor League Coaches 1. Project Overview This project aims to develop a software app designed to help baseball coaches evaluate and place minor league player prospects into Single A, Double A, or Triple A teams. The app will integrate with existing baseball performance platforms like GameChanger and allow coaches and adjudicators to input player performance during tryouts. It will provide comparative data from previous seasons and display real-time, anonymized aggregate data for player assessments. 2. Objectives Primary Goal: Streamline and enhance the evaluation process for coaches to assign players to appropriate minor league teams based on performance. Secondary Goals: Allow integration with existing platforms like GameChanger. Enable coaches and adjudicators to input and track live performance data. Display comprehensive player stats, including historical and tryout-specific data. Provide anonymized comparative data for player and parent insights. 3. Features and Functionalities 3.1 Integration with Existing Software GameChanger Integration: The app will pull previous season statistics from GameChanger for each player. Data Syncing: Automatically sync player stats from GameChanger to ensure up-to-date information. 3.2 Player Performance Input Tryout Performance Data: Allow coaches and adjudicators to input stats in real-time during tryouts. Categories for Evaluation: Hitting: Batting average, on-base percentage, slugging percentage. Pitching: ERA, strikeout-to-walk ratio, pitch velocity. Fielding: Fielding percentage, reaction time, arm strength. Base Running: Speed, stolen bases, base-to-base transition efficiency. Character Assessments (optional): Teamwork, coachability, work ethic. 3.3 Data Visualization and Analytics Individual Player Dashboard: Real-time tryout performance stats. Historical stats pulled from GameChanger. Anonymized Aggregate Data: Compare individual performance to the anonymized performance of other prospects using a bell curve distribution. Aggregate Data Metrics: Display key percentile rankings, highlighting where a player stands within their peer group. 3.4 Reporting and Feedback Player & Parent Access: Provide players and parents access to performance data through a secure portal. Visualize individual performance compared to the group to offer insights for improvement. Coach-Only Reporting: Generate detailed reports on each player's suitability for Single A, Double A, or Triple A placement based on performance metrics. 4. User Roles Coaches and Adjudicators: Ability to input performance data, generate reports, and access both individual and aggregate data. Players and Parents: View player performance compared to peers but only in anonymized format to protect other players' privacy. 5. Technology Stack Backend: Database: Store player performance data, historical stats, and anonymized aggregated data. API Integrations: Secure APIs to interface with GameChanger for data synchronization. Frontend: Web and Mobile App: Provide an intuitive interface for data input and visualization. Responsive Design: Ensure accessibility on desktops, tablets, and mobile devices. Data Security: Implement encryption to protect sensitive player performance data. Adhere to privacy laws and best practices to anonymize aggregated group data. 6. Development Phases Phase 1: Planning and Requirements Gathering (2 weeks) Define detailed technical requirements. Collaborate with key stakeholders (coaches, adjudicators, parents). Phase 2: Backend Development (4-6 weeks) Build the database for storing player stats and adjudication data. Implement API integration with GameChanger. Phase 3: Frontend Development (6-8 weeks) Create user interfaces for coaches, adjudicators, players, and parents. Develop input forms for performance metrics. Build the visualization tools for displaying individual and aggregate data. Phase 4: Testing and Feedback (3-4 weeks) Conduct beta testing with a group of coaches and players. Refine the app based on feedback and performance. Phase 5: Deployment and Launch (2 weeks) Deploy the app on relevant platforms (web and mobile). Provide training materials and support for coaches. 7. Key Performance Indicators (KPIs) Usability: Track user adoption rates, specifically how coaches, adjudicators, and parents engage with the app. Performance: Monitor the integration with GameChanger for data accuracy and syncing speeds. Accuracy of Evaluation: Measure the success of the app in improving player placements through feedback surveys. 8. Budget and Resources Development Costs: Include backend, frontend, and integration development. Ongoing Costs: Maintenance, hosting, and customer support. Human Resources: Software developers. User interface/experience (UI/UX) designers. Quality assurance (QA) testers.

## Programming Language(s):
Open to whatever is chosen to be relevant

## Hardware/Software Requirements:
iphone / android

## Current Work/Arrangement:
None

## Previous Project?:

no

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### Project ID:
949

### Company:
IOTO International Inc.

### Project Areas:
Mobile Development

### Company Profile:
IOTO International Inc. (IOTO), was established in 2003 to research and develop small world digital media solutions to real world problems. A BC incorporated SME, IOTO leverages lean and agile methodologies to create elegant solutions. We are a learning organization: practising creating, acquiring, and transferring knowledge, while modifying organizational behavior to reflect new insights. In 2023 the International Research Centre in Artificial Intelligence of UNESCO (IRCAI) named IOTO's Goverlytics among a global top one hundred projects solving problems related to 17 United Nations Sustainable Development Goals.
https://ircai.org/top100/entry/goverltyics/

### Project Description:
The project will make use of mobile device location to serve locally relevant information that elicits user responses about user concerns at that location. Goverlytics is an established lens on politics which has won international recognition
https://ircai.org/top100/entry/goverltyics/ This project will localize Goverlytics information using spatial data, providing locally relevant and selectable content that reflects user interests at the mobile device location. The finished applciation prototype will be similar to sports tracker apps. There is some flexibility in the scope of the project and in the tech stack. There is the possiblity to separate and to divide the project into smaller parts as appropriate once students begin. Flutter or React Native are among the options that might be used. Goverlytics data are accessed through API. One or more people with technological and domain knowledge will support students during the project.

### Programming Language(s):
Flutter or React Native for app developement

### Hardware/Software Requirements:
PCs Mobile devices or emulators.

### Current Work/Arrangement:
https://goverlytics.com/developers

### Previous Project?:
no

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## Project ID:
951

## Company:
Computotal CSI

## Project Areas:
Web Development,Mobile Development

## Company Profile:
Computotal provides quality advice and support to its clients regarding network and computing systems by proactively planning, designing, installing, and maintaining computer networks. Computotal wants to provide a single platform for the clients to connect with the right IT technicians to provide them with the services they need. The technicians/service providers should also be able to join the IT Pros network by registering through the platform.

## Project Description:
The objective is to develop a database-enabled responsive website that allows Small and Medium Business (SMB) companies to find IT Professionals for specific projects and tasks. The pool of IT Pros would be the one individual technicians and IT companies provide, once they sign up and register as a service provider.

## Programming Language(s):
The following technologies are being used for the development of the website. Frontend framework: Angular Backend Technologies: TS Node, MongoDB (Database) Web Hosting service: Amazon Web Service, Digital Ocean.

## Hardware/Software Requirements:
All required in terms of HW/SW is a computer and access to the Internet. Once the initial meeting takes place, we would decide on keeping or switching the hosting company and type of hosting package, as well as specific Apps needed to start developing. If there are any other needs, Computotal will provide such resources.

## Current Work/Arrangement:
The project is almost complete. Most requested functions work. Basically, these are the high-level requirements. Done: • Create a responsive website for clients and technicians where they can create accounts and register with the company. • Allow: + clients to find services for their IT needs. + IT Pros to list themselves or their business so that they can get customers. + clients to leave a review of the service they were provided, preferably, a star rating system. + the IT Pros to leave feedback about the client they provided their service to. • View the service categories as icons on the landing page. • Have a survey-like system to ask customers questions regarding the service they are looking for after choosing a category. • UI/UX of the websites. • Admin can create a new service so that IT Pros can provide new types of services. • And, Admin can create a new service so that new services can be categorized appropriately. • Create a responsive website for the admins where they can manage the ongoing projects and review both customers' and technicians' feedback. Pending: • Create/determine/add a built-in billing system on the website. • Target the project for a city-wide scope (however, there is a potential to go global later on, having the website available in different languages). • Provide documentation for the source code for future teams to continue working on the project. • Have a chat feature where the client and IT Pro can talk so that they can plan the job (probably not needed).

## Previous Project?:
yes

### Project ID:
959

### Company:
Envia Technologies

### Project Areas:
Mobile Development

### Company Profile:
We are developing an AI product targeting parents, to streamline their kids' schedules and activities into one automated shared calendar.

### Project Description:
We are developing an app for Android and iOS with a fully interactive calendar and dashboards of automated events/activities and tasks using AI and Machine Learning: 2. The app will offer the following features: a. Calendar including viewing and modifying depending on your preferences b. Publish events, tasks and activities with household members (family group) or other groups c. Create Tasks and assign it to people to your household or your other group(s) d. Create Other user groups (outside of your family household) and send invites

### Programming Language(s):
Reactive and Typescript

### Hardware/Software Requirements:
None

### Current Work/Arrangement:
I don't have any arrangements.

### Previous Project?:
no

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## Project ID:
960

## Company:
Simoes Financial Ltd.

## Project Areas:
empty

## Company Profile:
Simoes Financial Ltd, is a financial company pursuing an idea on communications and learning in order to enhance and teach much needed Critical Thinking skills.

## Project Description:
Overview: Concept2024 is a multi-faceted online debate platform designed to facilitate structured, respectful, and safe debates on any topic. The platform will offer a space where participants can engage in discussions at various levels, governed by strict debate criteria. Similar to how Chess.com connects players for online games of chess, Concept2024 will use video protocols to connect users for live debates. The software will manage and control the debate format, ensuring a fair and balanced discussion. Key Features: 1. Verified Users: All participants will be verified to ensure accountability and prevent anonymity. This verification will include collecting basic details like name, address, and date of birth to uphold safety standards. 2. Video-based Debates: Participants will debate face-to-face via video. This helps establish a personal connection and discourages harmful or abusive behavior. 3. Strict Moderation Guidelines: The platform will have clear rules against hate speech, personal attacks, and abusive language. Users themselves will report any violations, minimizing the need for constant oversight. 4. Multiple Debate Levels: Three initial debate levels will allow users to choose the format that suits their preference: o Level 1 - Factual Debates: Serious debates with research-backed arguments. Users are ranked based on their ability to present factual and well-reasoned points. o Level 2 - Open Debates: A less formal debate format, focused on free expression without strict fact-checking or accuracy metrics. o Level 3 - Friends and Family: Private, social debates between invited participants. No rankings or reporting are needed for this level. Revenue Streams: 1. Paid Subscriptions: Premium features or advanced debate levels. 2. Advertising: Space for targeted ads within the platform. 3. Market Research: Data from debates could provide insights into public opinion on key topics, valuable for businesses, media, and political organizations. 4. Special Events: Sponsorships for high-profile debates or events. Platform Mechanics: • User Registration: Users must register and verify their identities. Details like name, address, and date of birth are required. • Debate Scheduling: To start a debate, a user (the “Initiator”) posts a topic with a suggested date and time. Other users can express interest, and a random selection process will match participants. • Debate Structure: Debates will follow a clear format, managed by the platform's software: o A short introductory segment ("hello neighbor") to establish rapport. o Opening statements, structured points and counterpoints, and conclusions. o Time controls with visual cues (green/yellow/red) to indicate remaining speaking time. o Automatic cut-off when time expires to maintain order. • Rating System: o Factual Debates: Users rate each other on preparation, argument quality, and attitude. o Open Debates: Users decide if they would debate the same person again. o Friends & Family: No rating required. Technical Requirements: 1. Video Connection System: Secure video call functionality, with options for recording and archiving. 2. Debate Timing Control: A system for managing debate timing, including visual signals and automatic mic cut-offs. 3. User Rating and Feedback: Tools for users to evaluate each other's performance post-debate. 4. Registration and Verification System: A secure way to handle user identity verification and maintain privacy. 5. Abuse Reporting Mechanism: Easy-to-use reporting tools for users to flag inappropriate behavior. 6. Database Management: Handle data storage for user information, debate recordings, and rating data. 7. Scalable Infrastructure: The platform must be designed with scalability in mind, to handle increasing user numbers and data storage as the platform grows. Development Goals: • Create a beta version showcasing core functionalities: user registration, video debate setup, timing system, and user feedback tools. • Develop cost estimates for scaling the platform to support a larger user base. • Ensure data privacy and security are maintained, particularly around user registration and video content.

## Programming Language(s):
To be determined by student input

## Hardware/Software Requirements:
Basic computing hardware and appropriate gaming development software that can extend on Chess.com

## Current Work/Arrangement:
None, this is conceptual at this point. The basic programming can be based on the Chess.com website and then other programs need to be incorporated.

## Previous Project?:
no

### Project ID:
964

### Company:
Your Main Guy

### Project Areas:
Machine Learning/Algorithms/Research

### Company Profile:
Your Main Guy is a consulting business run by Julien Mainguy. The purpose of Your Main Guy is to assist in all manners to grow a business, be it through marketing, compliance, or general business consulting. His experiences in the corporate world and various non-profit organizations made him realize he is at my best when helping people achieve their goals. He thrives on helping you grow your business and succeed in your professional life.

### Project Description:
The project focuses on the feasibility of AI-enhanced program. The goal will be to create a interface guiding professionals regarding technical documents (specifically code standards), for different types of engineers or designers. The project aims to check the feasibility of AI enhanced program, as there is a lot of enforcement that needs to be combined in order to search efficiently through a simple interface (like a chat bot). The project needs to check the reliability and be able to refer to references when needed or requested by the users.

### Programming Language(s):
Coding is required, but no programming languages have been chosen yet.

### Hardware/Software Requirements:
There are no Hardware Requirements, although due to the sensitive nature of the information, a secure server would be required. In terms of Software Requirements, the front-end should be accessible to all devices.

### Current Work/Arrangement:
Only light research into AI possibilities has been done but no decisions have been made at this time. However, we can provide a list of standards, documents, and examples for students to look at.

### Previous Project?:
no

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## Project ID:

994

## Company:

Agora Network Technologies

## Project Areas:

Web Development

## Company Profile:

Agora Network Technologies Inc. is developing the third and final version of Agora Art, a platform designed to revolutionize festival fashion discovery. This version represents the culmination of years of development and refinement, leveraging insights gained from multiple iterations. Agora V3 aims to deliver a cutting-edge "virtual mall" experience, combining personalized recommendations with a unique business model focused on connecting festival-goers to curated sellers. Agora has sponsored BCIT ISSP projects for five terms, beginning in 2020. These terms have built critical foundational features such as: - An Etsy-like marketplace with checkout and tax integrations. - Recommendations powered by AI, leveraging the OpenAI API. - The first generation of an artist recommendation algorithm, now ready for enhancement in this project. With V3, Agora transitions to a data-driven marketplace model that uses scraping tools to curate products from Instagram-based sellers, offering sellers free traffic initially and transitioning to revenue-sharing through Shopify connections. Your contributions will play a vital role in bringing this vision to life.

## Project Description:

https://fallacious-ozraraptor-f59.notion.site/BCIT-ISSP-Proposal-Shopify-Integration-14cee584d2ee80819767eacea5e50538?pvs=4 **Client:** Agora Network Technologies Inc. **Project:** Building Shopify Integration: Streamlining Seller Connections, Product Syncing, and Payment Portal. ### **Client** Agora Network Technologies Inc. is developing the third and final version of Agora Art, a platform designed to revolutionize festival fashion discovery. This version represents the culmination of years of development and refinement, leveraging insights gained from multiple iterations. Agora V3 aims to deliver a cutting-edge "virtual mall" experience, combining personalized recommendations with a unique business model focused on connecting festival-goers to curated sellers. Agora has sponsored BCIT ISSP projects for five terms, beginning in 2020. These terms have built critical foundational features such as: - An Etsy-like marketplace with checkout and tax integrations. - Recommendations powered by AI, leveraging the OpenAI API. - The first generation of an artist recommendation algorithm, now ready for enhancement in this project. With V3, Agora transitions to a data-driven marketplace model that uses scraping tools to curate products from Instagram-based sellers, offering sellers free traffic initially and transitioning to revenue-sharing through Shopify connections. Your contributions will play a vital role in bringing this vision to life. --- ### **Project Title** **"Building Shopify Integration: Streamlining Seller Connections, Product Syncing, and Payment Portal"** --- ### **Overview** Agora is expanding its innovative "virtual mall" platform by integrating with Shopify to enable seamless seller onboarding and product synchronization. This project focuses on connecting Agora's marketplace with the Shopify Storefront API, allowing sellers to authenticate their stores, sync inventory, and facilitate customer purchases through Shopify's payment portal. As part of this project, you will help lay the technical foundation for Shopify integration, addressing seller authentication, data synchronization, and enabling key functionalities to enhance the user and seller experience. This integration is vital to Agora’s business model, ensuring scalable and efficient connections with Shopify stores. --- ### **Your Opportunity** This project offers an exciting opportunity to work with Shopify’s APIs, gaining hands-on experience with OAuth implementation, product synchronization, and payment portal integration. You’ll collaborate with a senior developer and industry mentors to build a high-impact solution that directly supports a live business. You’ll also: - Solve practical challenges in integrating third-party APIs with a custom Next.js platform. - Contribute to a project that bridges e-commerce and AI-driven recommendations. - Gain valuable experience with tools and processes used by leading e-commerce platforms. --- ### **Project Goals** **Objective:** Develop a scalable Shopify integration for Agora's marketplace, enabling sellers to authenticate their stores, sync product data, and facilitate purchases through a Shopify payment portal. **Deliverables:** 1. **Seller Authentication:** Implement OAuth authentication to connect Shopify stores to Agora. - Handle token exchange and secure storage of long-term access tokens. 2. **Product Synchronization:** Sync product data from connected Shopify stores, replacing previously scraped data. - Support efficient updates for inventory, pricing, and availability. 3. **Payment Portal Integration:** Enable customers to complete purchases through Shopify's payment system, ensuring smooth order fulfillment via sellers' existing Shopify processes. 4. **Stretch Goals:** - Develop a Shopify plugin to track sales made through Agora’s pay-per-view (PPV) business model. - Assist the recommendations algorithm ISSP project team by providing enriched product data. --- ### **What’s In It For You** - **Hands-on API Integration Experience:** Work directly with Shopify’s Storefront API and gain expertise in OAuth authentication. - **Real-World Problem Solving:** Solve challenging e-commerce integration issues that align with current industry needs. - **Portfolio-Ready Project:** Build an impressive project showcasing Shopify integration and scalable architecture. - **Mentorship Opportunities:** Collaborate with a senior developer and potentially industry professionals or previous BCIT term students. - **Career Development:** Potential for continued work in the spring term and beyond, with contracting opportunities for exceptional contributors. --- ### **Technology Stack** The stack remains aligned with the overall Agora Art ecosystem, with specific additions for Shopify integration: - **Programming Languages:** JavaScript/TypeScript, Node.js - **Frameworks:** Next.js for the frontend and backend (we use the built-in server-side API for Prisma operations) - **Shopify Tools:** Shopify Storefront API, Shopify App npm package - **Hosting:** Vercel - **Tools:** Prisma for schema management --- ### **Mentorship & Support** Taylor Aucoin, CEO of Agora, will mentor students throughout the project. Taylor brings extensive experience in software engineering and product development as a professional senior developer, guiding students in practical problem-solving and integration. While not a Shopify expert, Taylor has foundational knowledge and has identified relevant

documentation and tools to support your work. Additional support includes: - Weekly meetings to align on goals and address challenges. - Access to Shopify’s developer documentation and tools. - Collaboration with the recommendations algorithm team for shared data insights. --- ### **Expectations for Students** - Dive deep into Shopify’s documentation to understand and implement its APIs effectively. - Collaborate closely with mentors and team members to solve challenges and meet project goals. - Maintain clear communication, documentation, and task tracking to ensure alignment and productivity. - Embrace a growth mindset to overcome the complexity of OAuth implementation and API integration. - Build reusable, scalable, and secure solutions that align with Agora’s long-term vision. --- ### **Closing Statement** Join Agora’s BCIT ISSP project to help build the foundation of an innovative e-commerce solution. This is your chance to master Shopify API integration, develop real-world problem-solving skills, and contribute to a groundbreaking business model. With strong mentorship and potential career opportunities, this project will set you apart as a skilled and experienced professional. Help us shape the future of festival fashion—your work will make it happen.

## Programming Language(s):

Next.js: For both frontend and backend development. Prisma: For ORM and database schema management. PostgreSQL: For database operations. Shopify API: For integrating Shopify functionalities.

## Hardware/Software Requirements:

Hardware: Students are expected to use their own computers for development. Software: A Linux terminal environment (or equivalent setup) is required for compatibility with the development stack and deployment workflows.

## Current Work/Arrangement:

A significant amount of research has been conducted on this topic, ensuring a clear and well-defined direction for the project. Students will work from an existing codebase and will be provided with detailed instructions, comprehensive documentation, and structured workflows to guide their tasks effectively. This arrangement ensures a strong foundation for success and minimizes ambiguity in their work.

## Previous Project?:

yes

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## Project ID:

997

## Company:

Client: Conscious Connections Network (Inc. Pending)

## Project Areas:

Mobile Development,Machine Learning/Algorithms/Research

## Company Profile:

Agora Network Technologies Inc. is an experienced sponsor of BCIT ISSP projects, now expanding into a new domain with the development of **Conscious Connections**, a groundbreaking dating app designed to foster meaningful relationships through intentional matching. Agora has a proven track record of supporting innovative projects, having sponsored five BCIT ISSP terms for Agora Art, a platform revolutionizing festival fashion discovery. These projects laid the foundation for critical features such as: - An Etsy-like marketplace with checkout and tax integrations. - AI-powered recommendations using the OpenAI API. - The first generation of a recommendation algorithm that aligned artists with users' style preferences. The owner of Agora is sponsoring three projects this term, including this one, which is part of a separate business venture designed to develop scalable systems and expand into a new domain. This project will span two terms, with part two in the spring focusing on integrating the recommendation algorithm into an app (likely using Flutter or Next.js) and incorporating advanced analytics. Additionally, students will have access to **Agora’s existing recommendations algorithm** for reference. This algorithm, which has been iteratively developed and refined over multiple BCIT terms, provides a solid foundation and insights into how to structure, optimize, and test recommendation systems effectively.

## Project Description:

https://fallacious-ozraraptor-f59.notion.site/Conscious-Connections-Recommendations-Algorithm-14cee584d2ee8001abcff2bf53e4547e?pvs=4 Client: Conscious Connections Network (Inc. Pending) (owner of Agora Network Technologies Inc.) Project: Building Smart Recommendations for Conscious Connections Dating: An Algorithm for Intentional Matching ### **Client** Agora Network Technologies Inc. is an experienced sponsor of BCIT ISSP projects, now expanding into a new domain with the development of **Conscious Connections**, a groundbreaking dating app designed to foster meaningful relationships through intentional matching. Agora has a proven track record of supporting innovative projects, having sponsored five BCIT ISSP terms for Agora Art, a platform revolutionizing festival fashion discovery. These projects laid the foundation for critical features such as: - An Etsy-like marketplace with checkout and tax integrations. - AI-powered recommendations using the OpenAI API. - The first generation of a recommendation algorithm that aligned artists with users' style preferences. The owner of Agora is sponsoring three projects this term, including this one, which is part of a separate business venture designed to develop scalable systems and expand into a new domain. This project will span two terms, with part two in the spring focusing on integrating the recommendation algorithm into an app (likely using Flutter or Next.js) and incorporating advanced analytics. Additionally, students will have access to **Agora’s existing recommendations algorithm** for reference. This algorithm, which has been iteratively developed and refined over multiple BCIT terms, provides a solid foundation and insights into how to structure, optimize, and test recommendation systems effectively. --- ### **Project Title** **"Building Smart Recommendations for Conscious Connections Dating: An Algorithm for Intentional Matching"** --- ### **Overview** Conscious Connections seeks to transform the dating landscape by prioritizing values, intentions, and compatibility over superficial swipes. This project focuses on developing the core recommendation algorithm for two key functionalities: 1. **Swipe Recommendations:** Generate left-right swipe recommendations based on user preferences and survey data, with a daily reset. 2. **Highest Match Identification:** Identify the best available match for each user that has not yet been seen. The algorithm will leverage survey inputs and user activity data to generate intentional and meaningful matches. OpenAI APIs will normalize survey responses and user data to enhance the algorithm's accuracy and performance. Access to Agora Art's recommendation algorithm provides additional context and reference points to guide development. --- ### **Your Opportunity** This project offers an exciting challenge to create a sophisticated matchmaking algorithm that addresses both user satisfaction and scalability. You’ll be working at the cutting edge of recommendation systems, developing features that can transform user experiences in the online dating industry. What you’ll gain: - Hands-on experience in algorithm development supplemented with data optimization using the OpenAI API. - Access to Agora’s established recommendation algorithm as a learning tool and reference point. - Collaboration with an experienced sponsor and potential mentorship opportunities. Your work will serve as the foundation for a revolutionary app designed to create deeper, more intentional connections. --- ### **Project Goals** **Objective:** Develop and deploy the recommendation algorithm for Conscious Connections, supporting the app’s core features. **Deliverables:** 1. **Swipe Recommendations:** Build a dynamic system to deliver swipeable matches based on: - Survey responses, including values, preferences, and lifestyle indicators. - Daily resets to refresh match pools. There will be a maximum per day based on the size of our user population. - The number of matches available per day will be capped dynamically based on the size of the user population. 2. **Highest Match Identification:** Implement a feature to identify and prioritize the highest unseen match for each user. 3. **Data Normalization with OpenAI:** Use OpenAI APIs to preprocess and normalize user survey responses for consistent and accurate data inputs into the algorithm. 4. **Scalability:** Ensure the algorithm is scalable to handle thousands of users and their interactions efficiently. --- ### **Spring Term Options:** - **Algorithm Integration:** Integrate the recommendation algorithm into a Flutter or Next.js app, using AWS services for hosting and data management. - **Behavior-Based Scoring:** Develop an AI-driven scoring system that evaluates chat interactions, providing users with feedback and incentivizing positive behavior (e.g., similar to Uber driver ratings). --- ### **What’s In It For You** - **Cutting-Edge Experience:** Work on advanced algorithms and OpenAI APIs, building a product with real-world implications. - **Portfolio-Ready Project:** Showcase your skills in AI,

data processing, and recommendation systems. - **Collaboration:** Partner with a supportive mentor and gain insights into the startup world. - **Career Opportunities:** Potential for spring-term continuation and contracting work post-graduation for standout contributors. - **Reference Resources:** Access to Agora Art's recommendation algorithm for inspiration and guidance. --- ### **Technology Stack** - **Programming Languages:** Python, JavaScript/TypeScript - **Data Processing:** OpenAI APIs for normalization - **Algorithm Tools:** Machine learning libraries (e.g., TensorFlow or PyTorch) as needed for scalability - **Backend Integration:** AWS or similar cloud solutions - **Future UI Considerations:** Flutter for cross-platform apps or Next.js with Progressier for PWAs --- ### **Mentorship & Support** Taylor Aucoin, CEO of Agora Network Technologies, will provide guidance and mentorship. Taylor has extensive experience in software engineering and product development, offering support through: - Weekly meetings to track progress and troubleshoot challenges. - Access to relevant documentation and resources for OpenAI and data integration. - Strategic planning for scalability and future app integration. - Insights from Agora Art's recommendation algorithm to accelerate understanding of similar systems. Additional mentorship may include input from industry professionals or students from previous BCIT terms. --- ### **Expectations for Students** - Approach the project with enthusiasm, initiative, and a commitment to excellence. - Maintain clear communication and collaborate effectively with team members and mentors. - Focus on building a robust, scalable, and flexible algorithm that aligns with project goals. - Document your work thoroughly to ensure seamless handoff for future integration. --- ### **Closing Statement** Join us in building the foundation of **Conscious Connections**, a dating app that prioritizes meaningful relationships over fleeting interactions. This project gives you the chance to shape a transformative product, gain invaluable experience in AI-driven algorithms, and contribute to an app that could redefine how people connect. Your work will not only set the stage for a groundbreaking app but also pave the way for your professional growth. Let's create something extraordinary together—are you ready to make an impact?

## Programming Language(s):

Python: For algorithm development and data processing. Machine Learning Libraries: TensorFlow or PyTorch for scalability and advanced functionalities.

## Hardware/Software Requirements:

Hardware: Students are expected to use their own computers. Software: A Linux terminal environment or equivalent setup for development. Access to OpenAI API tools will also be required.

## Current Work/Arrangement:

This project is currently in the concept and UX foundations phase. While the rest of the service can be developed relatively quickly, the recommendation algorithm serves as the core feature and focus of this project. Students will receive a detailed project outline with clearly defined steps to achieve the objectives, ensuring clarity and direction throughout the project.

## Previous Project?:

no

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## Project ID:
998

## Company:
Impulse Studios

## Project Areas:
Web Development,Mobile Development

## Company Profile:
Impulse Studios is a full service web design & development agency located in Vancouver, British Columbia. With over 15 years experience, Impulse Studios has worked on large enterprise projects, small projects, and with startups, and are always striving to stay ahead of the curve. We specialize in making beautiful, easy-to-use digital tools and business solutions, while simultaneously keeping your customers and teams happy. There's no project too large, or too complex; we specialize in developing innovative solutions where there's no pre-existing roadmap. By utilizing a well honed process based on creative collaboration with each of our clients, Impulse Studios succeeds at delivering finely tailored websites and web applications that work for you. Since opening our doors as a full time studio in 2009, Impulse Studios has built a reputation for quality, reliability, and simplicity. We put this reputation on the line every day with our ever-expanding list of clients across North America, in diverse fields such as Motocross, Action Sports, & Education. We work with these clients to showcase the best parts of their business in a digital landscape, while creating a lasting connection with their clients.

## Project Description:
Building on the successful BCIT ISSP Student Project work of the fall 2024 term, Impulse Studios is launching the next version of a mobile application for a leading news publication in the action sports/motocross landscape, with additional functionality and features. This app provides an alternative to the website on mobile devices with the goal of making the mobile application its own destination instead of being so reliant on traffic from social media apps like Facebook and Instagram. We have been working in this space for over a decade, and you will have substantial experience and support throughout the creation of this project. While the mobile application extension will be in your hands, full training and guidance will be given to ensure you have the tools and access needed in order to produce the application, and while we would love for you to take the lead on architecture and production of the app, full support/mentorship/feedback will be provided as requested and at regular meetings throughout the projects. Current Web traffic (last 12 months): -5.4 million users -39 million page views Mobile Application Key Details: All web based API endpoints have been created, or will be created by our existing team; customizations and updates to the API endpoints can be made as identified and required during meetings. This was a BCIT selected project for the Fall 2024 term, and students have successfully built a framework for this app, including building the needed framework, page screens, navigation, authentication, and other content components. Additional information including rider pages, results systems, events pages, series pages, venue pages and more are required, as well as the integration of their digital magazine. The team at Impulse Studios have been working in this space for over a decade, and you will have substantial experience and support throughout the creation of this project. While the mobile application will be in your hands, full support will be given to ensure you have the API you need in order to produce the application, and while we would love for you to take the lead on architecture and production of the app, full support/mentorship/feedback will be provided as requested and at regular meetings throughout the projects. Must Haves: 1. Well documented code - updatable and extendable going forward as the feature set of the mobile application grows 2. Series screens - each series has a unique list of content that matches the home screen, but with only content about specific series 3. Event screens - the website currently has a robust event based system that provides schedules, articles, and results for specific events. Schedules and results are unique to each event, articles are simply tagged with events that they relate to and would be displayed as an index for that specific event similar to categories. All content would be provided and organized via an API 4. Results screens - each event has various different race results associated with it, results are displayed for the race. These results pages work in concert with the event screens, but also share a common visual display with results embedded within an article or page. 5. Rider screens - each rider has a brief bio, as well as a screen to display articles they have been tagged in, in a fashion similar to how events can be tagged in an article. Riders also have screens where their results are displayed. 6. Venue screens - each venue has various characteristics, including location, open date, previous race winners, etc, and needs to be built and styled to align with other specific screens.

## Programming Language(s):
1. React Native 2. Firebase or another service for push notifications. 3. Google Analytics 4, we use Google Analytics to track the current website and would need the mobile application integrated into the same analytics package. 4. Google Ad Manager integration. All ads are currently trafficked through Google Ad Manager and it will need to be integrated into the mobile application to continue to deliver sponsored advertising similar to the mobile website on the mobile app. 5. Tailwind for styling.

## Hardware/Software Requirements:
Compatibility with both iOS and Android. We would work together during scoping to determine compatibility with previous versions of mobile operating systems based on Canada/US usage, and taking into consideration any difficulties specifically related to supporting legacy mobile operating systems.

## Current Work/Arrangement:

Impulse Studios has been in operation for over 15 years, and is experienced with managing employees and contractors. The core team consists of a Founder / Creative Director, Operations & HR support person, and additional marketing, sales, proposal development, and accounting support as well as designers and developers working on specific projects. The founder takes care of all aspects related to client relationships, business development, project management, and project fulfilment oversight, working remotely with contractors to support workflow as required. For this project, the CEO would act as the project administrative lead, setting a kickoff meeting with the project team as well as overseeing and communicating objectives, assigning tasks and timelines, and ensuring the successful completion of this project. The founder attends all regular meetings, oversees task progress, replies to inquries and supports problem solving, and oversees technical development. Inherent in this project are many opportunities for mentorship from a seasoned industry expert with nearly two decades of experience working with brands like Honda, Red Bull, Ducatti, City of Sarnia, University of Toronto, and more.

## Previous Project?:

yes

## Project ID:
1003

## Company:
Strata Reserve Planning

## Project Areas:
Web Development,Mobile Development,Scripting/IT

## Company Profile:
Strata Reserve Planning is a Depreciation Report consulting firm for strata corporations. These reports are created using narrative report software, and the base was completed under the BCIT ISSP program in 2016. We have offices in Vancouver, Vernon and Victoria.

## Project Description:
Our current narrative report software application (ReservePlan.Ca) allows users to enter units of measure and ages that drive the revenue and expenses on future dates. The software creates a Word-based document and an Excel spreadsheet. The spreadsheet lays out the revenue and expenses based on the data in the database. The issue is that the spreadsheet has hard figures, not the formulas that we used to have in the spreadsheets. The software has been failing. An investigation has indicated that some of our software is no longer supported due to age. Our project is to update the original software, mainly developed by BCIT students in 2016, to the most current version. Our software consultant indicated that a direct jump was not possible due to the software's age, as some of the coding had changed over time. Current Database Server • Server type: MySQL • Server version: 5.7.44 - MySQL Community Server (GPL) • Protocol version: 10 The latest version of MySQL is 8.0.36, which was released on January 16, 2024. MySQL server version 5.7.44 is the final release of the MySQL 5.7 series. MySQL 5 has had a lengthy run since its release in 2005; thus, many organizations still have databases built on 5. x. But Oracle has been phasing out MySQL 5.7 support for various platforms over the past few years, and the end of life for MySQL 5.7 was slated for October 2023. We are now approaching 2025. Web Server • cpsrvd 11.110.0.49 • Database client version: libmysql - mysqlnd 8.1.31 • PHP extension: mysqli Documentation curl Documentation mbstring Documentation • PHP version: 8.1.31 phpMyAdmin • Version information: 5.2.1 PHP 5 is a server-side scripting language used for web development. It was released in 2004 and was widely used for building dynamic websites until its successor, PHP 7, was introduced in 2015. PHP 8.2 is the latest PHP version, which brings readonly classes, DNF types, null, false, and true types, sensitive parameter redaction support, a new random extension, several new features, and a few deprecations. Although my version was built in 2016, the end-of-life support was over in January 2011. The students will be supported by the proponent, one of BC’s oldest Depreciation report providers and the creator of ReservePlan.Ca – a narrative software program for CRF planning through Depreciation Reports.

## Programming Language(s):
As I am not a programmer, I do not know.

## Hardware/Software Requirements:
ReservePlan.Ca operates with a MySQL database and phpAdmin on a GoDaddy server. This was discussed in detail above.

## Current Work/Arrangement:
Please see above

## Previous Project?:
yes

### Project ID:
1005

### Company:
Strata Reserve Planning

### Project Areas:
DevOps,Web Development,Scripting/IT

### Company Profile:
Strata Reserve Planning is a Depreciation Report consulting firm for strata corporations. These reports are created using narrative report software, and the base was completed under the BCIT ISSP program in 2016. We have offices in Vancouver, Vernon and Victoria.

### Project Description:
I call this project "CRF Update" for the Contingency Reserve Fund planning application. Our current narrative report software application (ReservePlan.Ca) allows users to enter units of measure and ages that drive the revenue and expenses on future dates. The software creates a Word-based document and an Excel spreadsheet. The spreadsheet lays out the income and expenses based on the data in the database. The issue is that the spreadsheet has hard figures, not the formulas that we used to have in the spreadsheets. This is fine in the context of the current report. CRF Update is a new stand-alone application where we will load the spreadsheet inputs, including the inflation rate and the interest rate for investments, to create a copy of the spreadsheet. This application will allow the subscribers to play with the input factors, move the years that the expense is indicated, and insert the actual expense if the cost is incorrect, so there is always an up-to-date CRF plan online. The formulas would be based within the application. The main point of difficulty will be the change in the number of components for each assignment, meaning the software will be able to take new sizes as required. However, this is not difficult as the formulas are already being used in the ReservePlan.Ca database. Subscribers would pay for access via a PayPal or credit card application annually. We expect a high demand as the updates are now 5 years apart from 3 years. This will be on the domain “CRFPlan.Com.” The design is already sketched out and is intended to be a tablet or desktop application, with some mobile applications. Most users will be older (over 50), meaning the architecture needs to be relatively easy. The students will be supported by the proponent, who is one of BC’s oldest Depreciation report providers, creator of ReservePlan.Ca—a narrative software program for CRF planning through Depreciation Reports, author of Depreciation Reports in BC, contributor to UBC on the issue, and Subject Matter Expert for the BC Housing Policy Branch on Depreciation Reports.

### Programming Language(s):
As I am not a programmer, I do not know.

### Hardware/Software Requirements:
ReservePlan.Ca operates with a MySQL database and phpAdmin on a GoDaddy server. Although this is not my area of specialization, I would assume a similar setup would be reasonable for "CRF Update."

### Current Work/Arrangement:
This is a new project. Current strata corporations try to manage Excel spreadsheets but do not have access to the complex underlying formulas.

### Previous Project?:
no

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## Project ID:
1011

## Company:
Skyline Ziplines Ltd

## Project Areas:
DevOps,Networking,Web Development,Mobile Development,Scripting/IT,Machine Learning/Algorithms/Research

## Company Profile:
Skyline is a professional zipline course builder that designs, engineers, and operates world class Ziplines, Challenge Towers, Giant Swings and Suspension Bridges. Backed by extensive expertise and an exciting history of zipline inventions, Skyline continues to reinvent flyer thrills around the globe. With over 500,000 feet of cable using our skyTECH System, you can be assured of the highest quality of craftsmanship, the highest standards of safety, off the chart adrenaline and the best return on investment Skyline originated in the world renowned ski resort of Whistler, British Columbia, Canada. After building and operating our first zipline, we have envisioned taking the industry to the next level with professional zipline course builders who design faster, higher, longer and most importantly, safer ziplines. We took the traditional zipline concept and evolved it into a new hybrid of “skytravel.” The skyTECH System allows adrenaline to soar as flyers reach speeds up to 140 km/h (87 m/h) 37 stories above the ground while effortlessly flying hundreds to thousands of feet. Our innovative patented technology and advanced engineering teamed with our construction and operational expertise, have eliminated common restraints typically found throughout the zipline industry. The skyTECH System used by our professional zipline course builders and designers has become a leader in the global zipline market, setting new industry standards in maximizing safety, thrills and profits while minimizing costs. Discover why our technology has the reputation for being well ahead of the rest and why it has the best return on investment.

## Project Description:
The goal is to develop a cloud based application that can be used by our sites across the globe, to perform the daily, weekly and monthly inspections. These are currently done on paper, and we would like to go paperless and at the same time create a streamlined inspection process, with a clear overview and records of previous inspections. A portion of the groundwork has been done by a previous BCIT team and we have all the github files available. The final product will empower frontline staff, and utilize operational feedback through intelligent, digital checklists and mobile task management, and should ideally cover the following: Structured and automated checklists, workflows and tasks All manuals can be stored on the application and be accessed by relevant team members Digitalized and streamlined operational management routines Lead to more accurate and consistent inspections amongst all individuals who carry out the checks Achieve a more cost-effective setup via more efficient workflows, improved collaboration and communication Ensure group operational compliance Get real-time insight on the operational status on dashboards (Can be accessed by any computer)”

## Programming Language(s):
English

## Hardware/Software Requirements:
Hardware Requirements for Developers Development Machines: Processor: Multi-core (e.g., Intel i5 or equivalent) RAM: Minimum 16 GB Storage: SSD with at least 512 GB Software Requirements for Developers Development Tools Programming Languages: JavaScript (Node.js for backend, React/Vue for frontend) Python or Java (for backend services) Frameworks: Express.js (for Node.js applications) React or Angular (for frontend development) Database: PostgreSQL or MongoDB Version Control: Git (with GitHub for repository management) Development Environment IDE/Text Editor: Visual Studio Code, IntelliJ IDEA, or similar Containerization: Docker for application deployment CI/CD Tools: Jenkins, GitHub Actions, or CircleCI for continuous integration and deployment Cloud Infrastructure Cloud Provider: AWS, Azure, or Google Cloud for hosting

## Current Work/Arrangement:
The project was temporarily suspended due to constraints in labor and funding. We are eager to reinstate the project with the goal of completing it by May 2025, aligning with the onset of our inspection season.

## Previous Project?:
yes

## Project ID:
1013

## Company:
Max Performance Sports & More

## Project Areas:
Web Development

## Company Profile:
We are a boutique hockey shop based in Vancouver. We have been servicing the high end and at times low end hockey player for the past 8 years. We are known for being the best skate sharpener and having a very robust online business. We are locally owner and operated and plan on moving to a bigger location in the coming year but we need some help to launch to the level we would like to get to.

## Project Description:
We are looking to overhaul our current website (hockeyvancouver.ca). Online business is the heart of our story. We were build on the back of selling with a piece meal website and using ebay. We have worked that into a very busy inline platform in spite of it being not what we want it to be. We are looking to re-do the entire site. Change the look, the feel, functionality-everything customer facing. The backend needs a lot of work with better SEO, potentially coding and anything else that makes a great site. We are very flexible on how this project will play out. We will certainly listen to our student for what they think would work and be in lock step to execute the best possible rebrand in a partnership.

## Programming Language(s):
We work on a shopify platform but unsure of what type or coding would be required.

## Hardware/Software Requirements:
Unsure of what would be required here.

## Current Work/Arrangement:
We have an existing site that we revamped a few years back but wasnt done to our satisfaction. We think there is lots of potential for improvements and upgrades to our existing site.

## Previous Project?:
no

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### Project ID:
1015

### Company:
Max Performance Sports & More

### Project Areas:
Mobile Development

### Company Profile:
We are a boutique hockey shop based in Vancouver. We have been servicing the high end and at times low end hockey player for the past 8 years. We are known for being the best skate sharpener and having a very robust online business. We are locally owner and operated and plan on moving to a bigger location in the coming year but we need some help to launch to the level we would like to get to.

### Project Description:
We want to develop a first in class app for use at our store. We see the app to allow our customers to book skate sharpenings, update them on the current wait, scan or update their skate sharpening punch card, hold their hollow or profile preference and allows us to push notifications to them on reminders, skate completion or sales. We want to be the first store to launch this in the industry. The dream is to allow our customers to better plan their trips to the store. We realize that peoples time is valuable, with an app that allows them to book a time to ensure they get what they want when they want. The sky is the limit, we would also allow for the student to have some input on the direction this could go as well.

### Programming Language(s):
unsure of the coding required to develop an app.

### Hardware/Software Requirements:
unsure of the hard or software required for this project.

### Current Work/Arrangement:
I would think this would be a semester long project.

### Previous Project?:
no

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### Project ID:
1016

### Company:
Federation of Independent Schools BC

### Project Areas:
DevOps,Scripting/IT

### Company Profile:
FISA represents 320 independent K-12 schools within BC. We work closely with government to ensure BC families have choice in education (UN Universal declaration of Human Rights - Article 26) and provide an education that supports the goals of the province and BC families.

### Project Description:
First off, I apologize for the late submission of our project proposal. FISA worked with some first class students on a project in the Fall term. The project will make our data collection and workflow more efficient and accurate. We are looking to implement the solutions the BCIT team created but there are still some issues that require that team's level of expertise to make it fully functional. FISA is also looking to update our webpage and are looking for solutions to enhance our communication with our member schools from around the province.

### Programming Language(s):
Unsure

### Hardware/Software Requirements:
FISA has relied on the expertise of the BCIT to inform us of software solution needs.

### Current Work/Arrangement:
The FISA website currently uses WordPress and is dated. We would also like to access website analytics and update the website efficiently. Our present weekly communication to schools is delivered within an email, which can be restrictive for the presentation of accompanying documents.

### Previous Project?:
yes

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