Project Title:	AirScout Live Mobile Application
Status:	**Pending**
Sponsor:	Tempo Communications
Proposal Summary:	The AirScout Live Android application measures Wi-Fi performance using a phone or tablet. The application assists the user to determine Wi-Fi performance by identifying and locating all available access points, determining AP signal strength, and identifying equipment manufactures. This project will ask a team of students to conduct a review of the application, perform competitive analysis, work-flow analysis and identify new value-added features. The project will conclude with the development of a new AirScout Live application that incorporates all of the critical to success factors derived from the team's research.
Attachments:	Click to Get

Project Title:	Canvas Log Explorer
Status:	**Pending**
Sponsor:	Nordson ELECTRONICS SOLUTIONS
Proposal Summary:	Objective Analyze and display events from Canvas Log files Scope The software should open multiple log files and bring up information requested by the operator. Options include: Display all errors Show all motions Display dispense instructions Display board status Track log times Coordinate motion/dispense with error states Valve time calculations Setup parameters Other software features described in the Software Requirements document. Deliverables Deliver a software program (with source code) capable of providing all of the features provided above. It would be best to do the software in C# but that is not a requirement.
Attachments:	None

Project Title:	Import FID information into a Canvas Recipe
Status:	**Pending**
Sponsor:	Nordson ELECTRONICS SOLUTIONS
Proposal Summary:	Scope 1) Creating a means for us to accept fid information from outside Canvas and inserting the information into a Canvas recipe. Also, if there is a means to extract fid information (found locations of fids relative to the pattern/workpiece origin). In this case, we would need to be able to a) identify within the recipe all the current/programmed fids and the relative locations that are using those fids for repositioning b) the coordinate system (machine origin, workpiece origin, pattern origin, etc.) that the fids are being tied back to c) inserting into the recipe or production run execution the fid information from the upstream equipment pass down d) processing the recipe with accurate dispense (or vision identification/representation of dispense) to targeted locations based on the received fid information 2) Creating a means for a user to insert "generic/synthetic" fids into a Canvas recipe. Target outputs: a) Need to identify our fiducial structure within a Canvas recipe to set the requirements for formatting any such synthetic fids (e.g. maximum/minimum model size) b) Need to identify which fid modes/algorithms where a synthetic fid could be used (e.g. dot finder, corner finder, edge finder, shape/template finder, etc.) & what are the requirements for successful detection with such a fiducial (e.g. light to dark scan vs dark to light scan, directionality of the scan for edge/corner finding, etc.) c) Define a methodology for creating a synthetic fiducial (use MS paint? Some other program? What should be the allowed file format for such a fid?) d) Ability to insert the synthetic fiducial into the process program at a relevant fid find operation/location within the program. (Likely requires a copy of Canvas to work with.) e) Ability to define rotation or other critical fid teaching information to be input to the process program/recipe with the fid information. Deliverables Deliver source code capable of importing fid information and location per the information provided above.
Attachments:	Click to Get

Project Title:	CoUML
Status:	**Pending**
Sponsor:	CSUSM CSTEM
Proposal Summary:	Project Title: CoUML-Coding in UML Together A web application that allows multiple active team members to work on software projects together. With a design-first approach, it should have the following features: (1) Project management (create new, change) (2) UML diagram editor (focus on UML class diagrams) (3) Save UML designs in XML (4) Convert UML designs into code skeleton in Object-Oriented Languages (focus on Java) (5) Read in code (say Java) and convert it into UML class diagram (6) Export UML designs in PDF/JPEG
Attachments:	None

Project Title:	Enhance DevOps Metrics Visualization Project
Status:	**Pending**
Sponsor:	Hunter Industries
Proposal Summary:	Working with CSU/SM, we have created metrics visualizations for key software development projects. We would like to work with you to enhance these very valuable metrics for the development team. We will be using Azure DevOps for data and Scalable Vector Graphics (SVG) for visualization technologies.
Attachments:	None

Project Title:	Personalized Academic Advising Application for Electrical Engineering program at CSUSM
Status:	**Pending**
Sponsor:	CSUSM CSIS
Proposal Summary:	The goal of this project is to design an application that works as an academic advisor for Electrical Engineering (EE) students. The target users of this application will be EE students. Currently, these students refer to the EE 4-year roadmap, academic advisors, and EE faculty to select courses for each semester. This application aims to make this process automatic. The students enter the courses they have passed, their interests and restrictions, and then the application provides them a roadmap for the next semesters. The purpose is to adjust the roadmap with the students interests and requirements such that the student completes the program as soon as possible. The students can use this system at any step in their program. They can change their interests/restrictions, and the application will dynamically adjust the recommended plan accordingly. This project is defined for a group of 3-4 Software Engineering students.
Attachments:	Click to Get

Project Title:	GigaCheck Wi-Fi Testing Platform Mobile Application and System Improvement
Status:	**Pending**
Sponsor:	Tempo Communications
Proposal Summary:	GigaCheck is used by broadband service installers to qualify Wi-Fi and wired data rates for customers obtaining premium (1Gbps) data delivery services. GigaCheck measures data rates up to 1.0Gbps over ethernet and 1.3Gbps over Wi-Fi and presents the data in a user-friendly method. The GigaCheck solution consists of a high-performance ethernet and Wi-Fi sensor, a customer facing mobile application and a cloud backend. This project will ask a team of students to propose and implement upgrades to the mobile application UI, modify the user experience and add new features. If time and resources permit, Tempo proposes application UI improvements be mirrored in the cloud database solution.
Attachments:	Click to Get

Project Title:	HunterFitness mobile application (Ongoing)
Status:	**Pending**
Sponsor:	Hunter Industries
Proposal Summary:	Build on the HunterFit application CSUSM student created last year. HunterFIt is a cross-platform mobile application written in NativeScript and Angular. This team will have the opportunity to work with cutting-edge technologies, including AWS Cloud. During this project we will enhance the existing mobile application based on the recommendations from the product owner. Students will employ TDD (Test-Driven Development) and other agile development methodologies.
Attachments:	None

Project Title:	CodeProfiler
Status:	**Pending**
Sponsor:	Viasat, Inc.
Proposal Summary:	What does CodeProfiler does? Moving forward, the dev team will write Variadic functions with event structures. Most analyzers just vary the parameter and validate, but the CodeProfiler event structures pass the different states of the caller and make sure the function(s) behave as expected. In the case of non-Variadic functions, the dev team will have to write the wrapper. The event structure will have the verification code. The result event structures are created and validated at runtime using golang assert & another built-in mechanism based on the verification code. Its very well possible every function output would have specific code. Eventually, this code will give the map for ML, and the existing anomaly detection can be leveraged. Expected output: Build the framework of CodeProfiler and put together a POC for a couple of new features.
Attachments:	Click to Get

Project Title:	League of Legends Overlay with Overworld
Status:	**Pending**
Sponsor:	CSUSM CSTEM
Proposal Summary:	Initial Ideas for the App: Develop a front end system(App) that works with both the Overwolf API and calls data from Riot's(Game Developer of League of Legends) API Overwolf Apps are mostly HTML and JS; Plans to program in React JS The App's features will be based on helping players find good teammates based on their in-game statistics and playstyle as well as give feedback to the user when joining a game Use algorithms to process data such as ranking, winrate, character preference, and game metadata to provide good teammate recommendations along with gameplay insight *View Attachment for further Description
Attachments:	Click to Get

Project Title:	VChat: Voice Chatting Mobile App
Status:	**Pending**
Sponsor:	CSUSM CSTEM
Proposal Summary:	Project Title: VChat: Voice Chatting Mobile App A mobile application that allows users to chat with each other in audios. It should offer the following features: (1) Voice data management (2) Convert audios into text (using external services available) (3) Tag each audio by keywords and allow search by keywords (4) Auto tag each audio with emotions (emotion detection) (5) Generate Tag Cloud visualization
Attachments:	None

Project Title:	Recommendation Engine using Machine Learning for System Debugging
Status:	**Pending**
Sponsor:	Qualcomm
Proposal Summary:	Objective Create a recommendation engine based on system debug settings data Scope Debugging system issues on a complex SoC involves collecting specific combination of debug information from various hardware modules. This information is stored as "system debug settings" & is collected over time from several users on various products. The team would be working on building a recommendation engine that learns from this information & provides recommended "System debug settings" for a given user/ user's-department. Deliverables Process "System debug settings" data to group them based on use-case, clean-up outliers Perform exploratory data analysis to identify trends & relationships between different variables Perform in-depth analysis using content-based or collaborative filtering machine learning techniques to predict settings Create a web-service using Restful-APIs that returns these predictions based on user-id/ user's department-id Technologies Python, Machine Learning, Java, AWS
Attachments:	None