# **CEN3031 Project Proposal**

Team Name: Impact Innovators

**Group Number:** 17 **Project Title:** EcoFriend

Github URL: https://github.com/unit0113/EcoFriend

Team Members: Christian Carey, Kyle Lund, Lily Reyes, Ed Lang

#### **Team Roles:**

Product Manager: Christian Carey

Scrum Master: Kyle Lund Developer 1: Lily Reyes Developer 2: Ed Lang

Programming Language: JavaScript (Frontend), Python (Backend), NoSQL (DB)

### **Challenge Statement:**

Climate change ranks among today's most pressing challenges. While many are eager to make a difference, they often lack clear guidance. Although software products exist to gauge individual ecological footprints and the internet is full of varied advice, there is a need for a single software that seamlessly combines these elements. There's a need for an engaging platform that not only estimates a user's ecological footprint but also offers actionable steps in its reduction and fosters collaboration among peers and communities to collectively make a difference.

#### **Solution to Challenge Statement:**

To address this challenge, we propose developing an app that targets individuals actively seeking ways to reduce their ecological footprint. This app streamlines the process of assessing one's environmental impact and presents actionable challenges to make eco-friendly contributions. On the web there are informative apps, such as footprint calculators, and blogs with advice on making ecological contributions. Our app is distinctive because it gamifies the experience of contributing and emphasizes community collaboration. Users can team up with friends to undertake environmentally beneficial quests, magnifying their collective impact. The gamified system, featuring digital points and badges, motivates users and instills a sense of friendly competition, fostering a feeling of belonging and shared eco-responsibility. Additionally, Our platform prioritizes user personalization with stringent user authentication measures to ensure data security. Our ultimate goal is to galvanize widespread, active engagement in preserving our environment.

### **Project Vision (Using the Geoffrey Moore Template):**

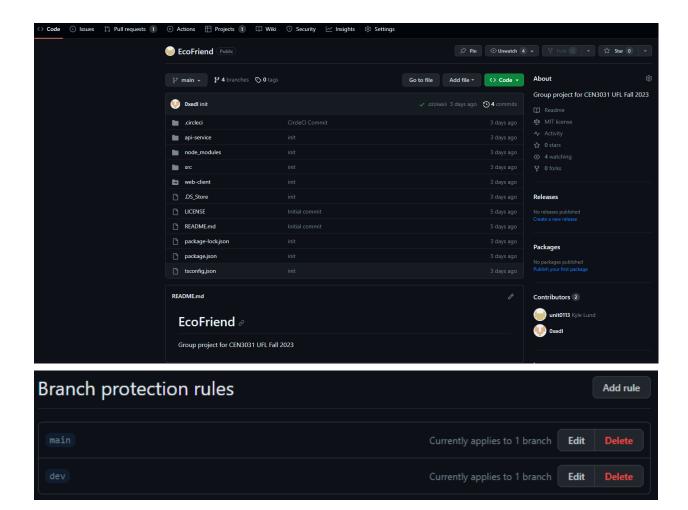
FOR environmentally-conscious individuals who seek ways to reduce their ecological footprint,

we offer EcoFriend — an app that's instructive, measurable and engaging. The app educates users about their ecological footprint, enables them to gauge it, and offers them individual and collaborative challenges to offset it. While there are ecological calculators and environmental impact tools out there, they require users to input their data each time they use the app. UNLIKE these tools, we will store user data to provide a personalized experience. OUR PRODUCT will have a seamless user interface, it will track user progress, and enable each user to share their achievements. These are just some of the gamified elements that will motivate users to take action to reduce their ecological footprint and to collaborate with others to do the same.

### Risk Management Plan (Using the Risk Management Process):

Risks:	Probability:	Effects:	Responses:
Technical Challenge: The platform has limited scalability.	Low	Serious	Leveraging cloud-based services to easily increase resources as needed, ensuring the platform can accommodate growth.
Technical Challenge: The platform has security vulnerabilities	Moderate	Serious	Encrypting stored data and minimizing the collection of Personal Identifiable Information (PII).
User Adoption: Failing to gain user trust and active participation.	High	Serious	Launch a compelling user onboarding process and provide incentives for early adopters.
People: Significant portions of the team is unfamiliar with the programming language and framework	Moderate	Serious	Prior to the first sprint, team members new to the framework will work through several tutorials to develop familiarity with the language.  Only development languages with significant documentation and/or tutorials will be chosen. Development that is complex and impacts the work of other members of the team will be well documented.
Organizational: Disruptions during the development cycle due competing priorities and other responsibilities.	Moderate	Tolerable	Prioritize flexible approaches and scheduling. Anticipate and communicate potential issues to the rest of the team.

Estimation: Difficulty in appropriately estimating time and complexity of tasks to assign necessary resources.	High	Tolerable	Extra focus will be given to evaluating task difficulty during product grooming and sprint planning. Refinements to our evaluation process will be a primary focus during sprint retrospectives.
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Branch protection rule
Branch name pattern *
main
Applies to 1 branch
main
Protect matching branches
<ul> <li>✓ Require a pull request before merging         When enabled, all commits must be made to a non-protected branch and submitted via a pull request before they can be merged into a branch that matches this rule.     </li> <li>✓ Require approvals         When enabled, pull requests targeting a matching branch require a number of approvals and no changes requested before they can be merged.     </li> <li>✓ Required number of approvals before merging: 1 ▼</li> <li>✓ Dismiss stale pull request approvals when new commits are pushed         New reviewable commits pushed to a matching branch will dismiss pull request review approvals.     </li> </ul>
✓ Require review from Code Owners
Require an approved review in pull requests including files with a designated code owner.
<ul> <li>Require approval of the most recent reviewable push</li> <li>Whether the most recent reviewable push must be approved by someone other than the person who pushed it.</li> </ul>
✓ Require status checks to pass before merging  Choose which status checks must pass before branches can be merged into a branch that matches this rule. When enabled, commits must first be pushed to another branch, then merged or pushed directly to a branch that matches this rule after status checks have passed.
Require branches to be up to date before merging  This ensures pull requests targeting a matching branch have been tested with the latest code. This setting will not take effect unless at least one status check is enabled (see below).
Q Search for status checks in the last week for this repository

Require conversation resolution before merging When enabled, all conversations on code must be resolved before a pull request can be merged into a branch that matches this rule. Learn more.
Require signed commits  Commits pushed to matching branches must have verified signatures.
Require linear history  Prevent merge commits from being pushed to matching branches.
Require deployments to succeed before merging Choose which environments must be successfully deployed to before branches can be merged into a branch that matches this rule.
Lock branch Branch is read-only. Users cannot push to the branch.
✓ <b>Do not allow bypassing the above settings</b> The above settings will apply to administrators and custom roles with the "bypass branch protections" permission.
Rules applied to everyone including administrators
Allow force pushes  Permit force pushes for all users with push access.
Allow deletions Allow users with push access to delete matching branches.

Dev Branch Rules are identical.



## CircleCI Integration

### **Overview**

