**Game Development Contributions**

**1. Core Game Systems**

* **Roguelike Loop Mechanism**: Implemented core roguelike progression cycles including Gold and status loop and Boss reward system
* **Pollution Value System**: Designed and implemented pollution mechanics affecting game difficulty and environment
  + Implemented pollution inheritance within game sessions
  + Ensured pollution value remains between 0-1000
  + Reduced pollution based on enemy maximum health
  + Added green wave effects when pollution level ≥ 5
* **Random Event System**:
  + Developed 14 different random events
  + Restructured the system with trigger page and result display page
  + Added story content for events
  + Implemented immediate status change functionality
  + Added restrictions for insufficient coins

**2. Map Design**

* Created 6 distinct maps with customizable player spawn positions
* Bristol map implementation
* Map9 engine failure map with altered gameplay mechanics
* Chemical box and ocean trash building implementation
* Wave system development

**3. User Interface Development**

* **Tutorial UI**: Created multi-iteration game tutorial interface
* **Backstory UI**: Added game background story interface
* **Team UI**: Implemented and fixed team information display
* **Game Results Screen**: Developed victory/defeat interfaces
* **Status Display**: Added in-game indicators (coins)
* **Easter Egg UI**: Designed and implemented hidden features
* **Death UI**: Added cause of death prompts when enemies defeat player

**4. Audio and Visual Effects**

* **Sound System**: Created game theme, standard battle music, boss battle music, Morse code sounds
* **Visual Feedback**: Implemented damage feedback effects
* **Random Backgrounds**: Developed randomized background system

**5. Documentation Contributions**

* Class diagrams
* Sequence diagrams
* Stakeholder models
* Creative Team Portrait

**6. Bug Fixes**

* **UI Fixes**: Resolved multiple display issues (button positions, text)
* **Gameplay Fixes**:
  + Fixed enemies not benefiting from game loop
  + Resolved Morse code audio playback issues