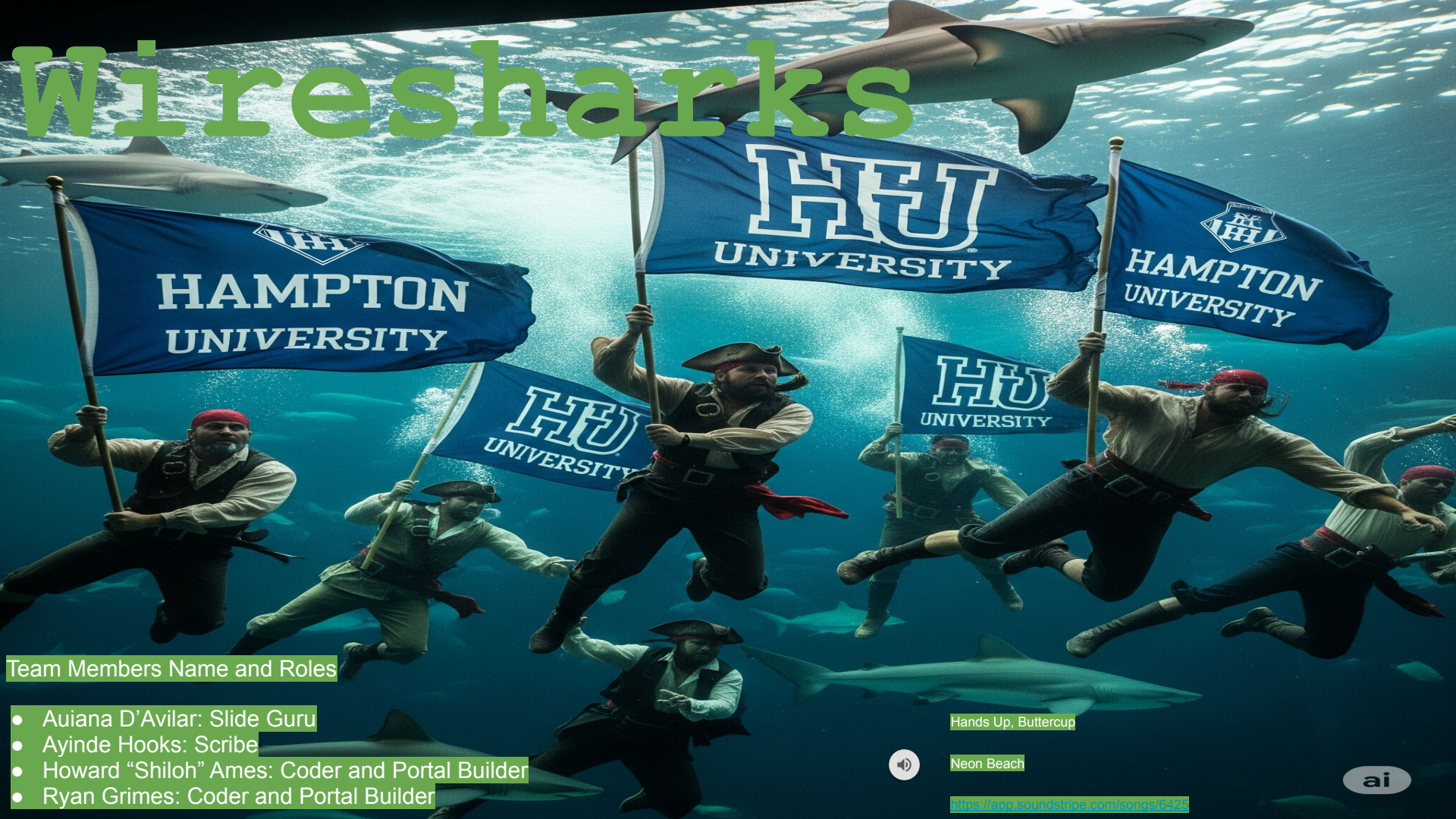


# Wiresharks



## Team Members Name and Roles

- Auiana D'Avilar: Slide Guru
- Ayinde Hooks: Scribe
- Howard "Shiloh" Ames: Coder and Portal Builder
- Ryan Grimes: Coder and Portal Builder

Hands Up, Buttercup

Neon Beach

<https://app.soundstripe.com/songs/R425>





# Meet the Sharks

Ayinde Hooks



Scribe

Ryan Grimes



Coder and Portal  
Builder

Howard "Shiloh" Ames



Coder and  
Portal Builder

Auiana D'Avilar



Slide Guru



# Why Are We Doing This?



## Goal:

Evaluate how easy it is to reproduce existing papers from ICSE with Code Repos Artifacts Selection .

## Key Questions We Ask:

- Did the repo include all necessary code?
- Was the dataset public and accessible?
- Were instructions up to date?
- Any issues with dependencies or hardware?
- How close were our results to theirs?

# Score Card

| Paper Availability  | Availability of Code and Software  | Availability of Datasets  | Computer Requirements  | GPU Requirements  | Documentation Quality   | Ease of Setup  | Reproducibility of Results   | Rating  |
|---|--|---|--|---|---|--|--|---|
| <p>1: Unavailable/Impossible to find.</p> <p>2: Paywalled/Very hard to access.</p> <p>3: Available, but via obscure link.</p> <p>4: Open-access, direct link.</p> <p>5: Open-access, easily searchable.</p> | <p>1: No code/Private repository.</p> <p>2: Code available, but major parts missing/broken.</p> <p>3: Code available, incomplete/needs big fixes.</p> <p>4: Code available, mostly complete, minor issues.</p> <p>5: Code fully available, complete.</p> | <p>1: dataset missing.</p> <p>2: Mentioned, but completely inaccessible.</p> <p>3: Available, but very hard to find/access.</p> <p>4: Available, but metadata is poor/incomplete</p> <p>5: Fully accessible with complete metadata.</p> | <p>1: No info/Impossible to meet.</p> <p>2: Vague/Requires rare hardware.</p> <p>3: Specific, but hard to meet.</p> <p>4: Specific, but common hardware.</p> <p>5: Clear, common, and flexible hardware.</p> | <p>1: No info/Mandatory custom GPU.</p> <p>2: GPU required, vague/high-end specs.</p> <p>3: GPU optional, specific specs.</p> <p>4: GPU optional, common specs.</p> <p>5: No GPU required (CPU-only).</p> | <p>1: None or misleading.</p> <p>2: Very poor</p> <p>3: Basic or needs much interpretation.</p> <p>4: Clear but few details.</p> <p>5: Comprehensive &amp; clear.</p> | <p>1: Cannot be run due to critical issues or missing parts.</p> <p>2: Can't run without major problems; needs expert help or significant workarounds.</p> <p>3: Can be run with some effort; requires troubleshooting or minor fixes.</p> <p>4: Runs well with minimal effort; minor adjustments might be needed.</p> <p>5: Runs perfectly by simply following the instructions; no issues.</p> | <p>1: Cannot be run due to critical issues or missing parts.</p> <p>2: Can't run without major problems; needs expert help or significant workarounds.</p> <p>3: Can be run with some effort; requires troubleshooting or minor fixes.</p> <p>4: Runs well with minimal effort; minor adjustments might be needed.</p> <p>5: Runs perfectly by simply following the instructions; no issues.</p> | <p>1 (Impossible): Cannot be run due to critical issues or missing parts.</p> <p>2 (Very Difficult): Can't run without major problems; needs expert help or significant workarounds.</p> <p>3 (Doable): Can be run with some effort; requires troubleshooting or minor fixes.</p> <p>4 (Mostly Smooth): Runs well with minimal effort; minor adjustments might be needed.</p> <p>5 (Plug and Play): Runs perfectly by simply following the instructions; no issues.</p> |



# Project 1: Business Flow Tampering (BFT) Detector

## What it does:

Automatically finds ways to bypass website paywalls and ads.

## Our Experience:

- Code was available, but instructions were very outdated.
- Major Python version and software conflicts prevented it from running.
- Hardware issues (Docker/virtualization) were a dead end.

Reproducibility Rating: 2/5 (Very Difficult)

Couldn't run the project to compare our results.



The background of the slide is a surreal underwater scene. Several pirates, dressed in traditional pirate attire like hats and vests, are swimming and holding up blue and white flags that feature the Hampton University logo (a stylized 'HU'). They are surrounded by numerous sharks of various sizes, creating a sense of being in a dangerous, hostile environment. The lighting is dim and blue, typical of an underwater setting.

## Project 2: Fairify

### What it does:

Formally checks AI models for fairness (ensures similar people get similar outcomes).

### Our Experience:

- Paper, Code, and Data were all available.
- Python version conflicts (needed older TensorFlow) required complex setup.
- **Critical Problem:** Script ran for hours, but NEVER produced any output files.

Reproducibility Rating: 3/5 (Doable)

We could run the project, but without results, we couldn't verify its claims.



The background of the slide is a composite image. It features several large, realistic-looking sharks swimming in a deep blue underwater environment. In the center, a group of pirates, dressed in traditional pirate attire like hats and bandanas, are swimming and holding up several blue and white flags. The flags prominently display the 'HU' logo and the text 'HAMPTON UNIVERSITY'. The scene is lit with a blueish-green light, creating an underwater atmosphere with some bubbles visible.

## Project 3: Bad Snakes

### What it does:

Evaluates tools designed to find malicious Python packages on PyPI.

### Our Experience:

- Paper and Code were open-access and easily found.
- Python version and dependency conflicts also caused setup issues.
- **Major Problem:** The actual original datasets used in the paper were NOT available due to privacy.

Reproducibility Rating: 2/5 (Very Difficult)

Missing crucial data prevented us from verifying their quantitative results.



A surreal underwater scene featuring several large sharks swimming around a group of pirates. The pirates are dressed in traditional pirate attire, including hats and bandanas, and are holding various flags. Some of the flags are blue with white text that reads "HAMPTON UNIVERSITY" and "HU". The scene is set in a deep blue ocean with sunlight filtering down from the surface, creating a dramatic and somewhat chaotic atmosphere. The pirates appear to be in a state of panic or urgency, as they are surrounded by the large, menacing sharks.

# Common Challenges

- **Outdated Instructions:** Frequent source of setup failures.
- **Python Versioning:** Newer Python often breaks older project dependencies.
- **Missing Datasets:** A significant barrier to full reproduction.
- **Environment Specificity:** Unexpected hardware or system settings blocking progress.
- **Lack of Clear Output:** Scripts running but no results appearing.



The background of the slide is a surreal underwater scene. Several large sharks are swimming in the water. In the center, a group of pirates, including Jack Sparrow, are swimming and holding blue flags with the 'HT' logo of Hampton University. The scene is lit with a blue, ethereal glow.

## Technology Used

**Programming Languages:** Python, JavaScript (for web tools)

**Core Libraries/Frameworks:** TensorFlow/Keras, Numpy, Z3, Poetry, Bandit, scikit-image (attempted)

**Automation/Virtualization:** Google Puppeteer, Docker (attempted for isolation), pyenv (for Python version management)

**Environment:** Apple Terminal, Kali Linux (WSL), VS Code, Github, and Docker



The background of the slide is a surreal underwater scene. Several pirates, dressed in traditional pirate attire like hats, eye patches, and bandanas, are swimming in the water. They are holding up various flags, some of which feature the Hampton University logo (a stylized 'HU' or 'H' with 'HAMPTON UNIVERSITY' text). The scene is populated with numerous large sharks, some of which are swimming very close to the pirates, creating a sense of danger and chaos. The lighting is dim, with light rays filtering down from above, giving it a deep-sea atmosphere.

## Key Takeaways

Reproducing scientific software can be extremely challenging.

For better reproducibility, projects need:

- Clear, up-to-date documentation.
- Accessible datasets (or clear alternatives).
- Robust environment setup instructions (e.g., using Docker or explicit versioning).