# An investigation into the effectiveness and impact of a Continuous Deployment pipeline upon university-level games development teams?

Frost Donovan

Abstract—What's the problem? What am I looking at? How does that help solve the problem?

Opening, Challenge, Action, Resolution

## I. Introduction

## II. BACKGROUND & SUPPORTING LITERATURE

What is CD [1], [2]? Best practices [3]? Has this been done before in academic setting [4]-[6]? What benefits is it supposed to have [1]? Drawbacks [7]? Links to other things - CI [8], Unit tests, regular product reviews, stakeholder (supervisor) confidence, git flow [9]

### III. RESEARCH QUESTION

From the above sources, I have formed **The actual question** 

A. hypothesis & null hypothesis

# IV. ARTIFACT

- A. What will be made
  - CD pipeline utilising Github Actions
- B. How will I ensure Quality

Quality control. Roadmap? Unit Testing? Integration testing?

- C. How will I create it
- D. Why will this answer the questions
  - V. RESEARCH METHODOLOGY
- A. Experimental Design
- B. Limitations

Time, resources

C. Sampling Plan

Sample size, sampling method

D. Data management plan

Managing, collecting, & storing data

E. Data Analysis

F. Ethical Considerations

#### VI. APPENDIX

Data analysis code, supporting screenshots, list of unit tests & testing plan

#### REFERENCES

- [1] J. Humble and D. Farley, Continuous delivery: reliable software releases through build, test, and deployment automation. Pearson Education, 2010.
- [2] Atlasian, "Bamboo best practice using stages," 2021.
- [3] P. M. Duvall, S. Matyas, and A. Glover, Continuous integration: improv-
- ing software quality and reducing risk. Pearson Education, 2007.
  [4] S. Krusche and L. Alperowitz, "Introduction of continuous delivery in multi-customer project courses," in Companion Proceedings of the 36th International Conference on Software Engineering, ICSE Companion 2014, (New York, NY, USA), p. 335-343, Association for Computing Machinery, 2014.
- [5] S. Krusche and B. Bruegge, "User feedback in mobile development," in Proceedings of the 2nd International Workshop on Mobile Development Lifecycle, MobileDeLi '14, (New York, NY, USA), p. 25-26, Association for Computing Machinery, 2014.
- [6] B. Bruegge, S. Krusche, and M. Wagner, "Teaching tornado: From communication models to releases," in *Proceedings of the 8th Edition* of the Educators' Symposium, EduSymp '12, (New York, NY, USA), p. 5-12, Association for Computing Machinery, 2012.
- [7] L. Chen, "Continuous delivery: Huge benefits, but challenges too," IEEE Software, vol. 32, no. 2, pp. 50-54, 2015.
- [8] S. Pittet, "Continuous integration vs. continuous delivery vs. continuous deployment."
- [9] V. Driessen, "A successful git branching model," 2012.