Jeffrey Bardwell, Ph.D.
Software Developer. System Designer. Scientist.

EMAIL (jhbardwell@gmail.com) | **PORTFOLIO** (https://jhbardwell.github.io/) | **GITHUB** (https://github.com/jhbardwell)

QUALIFICATIONS

I have nine years' experience as a research data scientist with project management and documentation, graphic design, and system design in the academic sector. I have two years' experience with agile project development and one year with software development in the private sector. I have a working knowledge of R, Python, Markdown, Mermaid, RegEx, C++, HTML5, CSS3, JavaScript ES6, and JSON. I am conversant in Visual Studio, GitHub, Linux, and GIMP.

I am new to integrating my development, design, and programming skills. So, I have begun creating utility software projects to help me build, manage, and present future software projects: a building better tools to build better tools mentality. Leveraging my versatile development, documentation, and coding skills would provide valuable assets to any business that creates custom software applications.

PROJECTS

Schedule Board: Kanban Scriptorium   **DESIGN**   **CODE**   **DEMO**
  Setup: Most kanban board systems such as Trello only offer limited and manual functionality.
  Problem: Kanban boards allow you to track and manually advance feature progression, but never account for prerequisite features, dynamic task lists, or implementation prioritization.
  Solution: Separate kanban feature card attribute from board placement functionality. The cards track low level system functions like prerequisite features and task lists. The board organizes higher level functions like feature implementation priority and progression. Then give it a medieval theme because deadlines are dragons just waiting to be slain.

Narrative Game: Five Minute Fantasy   **DESIGN**   **CODE**   **DEMO**
  Setup: Adapting stories from literature to videogames warps mechanics for a passive audience, applying them to an active one using branching linear narratives disguised as choices.
  Problem: Videogame decision tree node event triggers typically only give the illusion of player agency, choice, and meaningful consequence, often snapping back to a linear narrative. This supposed active medium lacks both player participation and emergent game play.
  Solution: Program emergent story telling using dynamic nodes that respond to both game logic and player-mediated input. Make option selection dependent on this input. Frame each choice as a shifting perspective rather than a branching path.

Frontend Website: Portfolio Projects   **DESIGN**   **CODE**   **DEMO**
  Setup: Many portfolio websites do not balance design and development and are over complex.
  Problem: Portfolios must paradoxically present comprehensive project overviews while using simple, minimalist navigation and often bury design or documentation elements.
  Solution: Produce a portfolio website that hybridizes good design and good development principles. Structure around three core project attributes: system design and implementation, program code content, and a minimum viable product demonstration.

RELEVANT EXPERIENCE

Research Scientist: Aptagen, LLC   Jacobus, PA   09/2021 – present
NAICS Code 541714: Research and Development in Biotechnology (except Nanobiotechnology)

I created JSON research archival databases and investigated biotechnology AI/ML models. My efforts to streamline client service business workflows allowed us to more efficiently assess grant opportunities, improve bioinformatics data sorting time management, and visually conceptualize real-time data.

Data Scientist: White Rabbit Intel, LLC   Durham, NC   03/2020 – 08/2020
NAICS Code 518210: Data Processing, Hosting, and Related Services

I refactored existing Python 3.6 spaghetti code into a series of concise functions. I assisted in the development of a modular AWS S3 bucket framework using boto3 and virtualenv libraries. My coding and brainstorming collaborations helped a fledgling startup reimagine our software-as-service business model and keep the product launch date on schedule.

Proposal Coordinator: A Square Group, LLC   Frederick, MD   11/2019 – 05/2020
NAICS Code 541611: Admin. Management and General Management Consulting Services

I researched IT and healthcare small business federal contract opportunities, semi-automating project state workflow with Excel macros. I edited Agile proposals and white papers, acted as a stakeholder communications hub, and facilitated scheduling using dynamic Gantt charts. My contributions helped our company submit five proposals and land one long term contract.

Software Developer: Twigboat Press, LLC   Brookneal, VA   05/2017 – 11/2019
NAICS Code 511130: Book Publishers

I used GIMP 2.8 to generate advertisement graphics and created R 2.15 scripts to correlate ebook sales time series trends. I also setup the email Sendy API to post the emails via Amazon AWS SES. Evinced by our revenue declines during newsletter hiatus periods and upticks following each release, my humble efforts resulted in a marked sales increase.

Lecturer: Longwood University   Farmville, VA   08/2013 – 05/2016
NAICS Code 611310: Colleges, Universities, and Professional Schools

I designed and taught an R-centric course to undergraduate biology and environmental science majors demonstrating experimental design, data sorting, model testing and validation, and graph presentation using these libraries: dplyr, ggplot2, magrittr, and tidyr. Based on pre- and post-semester tests, the course boosted student coding literacy, problem solving, and critical thinking.

Research Assistant: Baylor University   Waco, TX   08/2007 – 05/2012
NAICS Code 611310: Colleges, Universities, and Professional Schools

After attending several biostatistics courses, I created a Python 2.7 Tkinter GUI to identify bacteria with Bayes theorem likelihood scores. I also used R 2.15 linear mixed models to remove individual repeat measure data bias. My contributions validated the growing trend of university collaborations among computer science and ecology disciplines seen by the subsequent increase of such courses.