Daniel J. Butler

Research Engineer
Meta Platforms, Inc.

Email: djbutler@meta.com
Website: djbutler.github.io
GitHub: github.com/djbutler
Mobile: (585) 615-7082

Employment

2024-	**Meta Platforms, Inc.** – Research Engineer
2018-2024	**Salk Institute for Biological Studies** – Research Engineer, Data Lead
2016-2018	**Freelance** – Software Developer
2011-2016	**Univ. of Washington** – PhD Student, Robotics / AI / Vision
2014-15	**Heuristic Labs** (startup) – Computer Vision Engineer
2011	**Max Planck Institute for Intelligent Systems** – Intern
2009-10	**MIT Lincoln Laboratory** – Assistant Technical Staff

Honors

ECCV Koenderink Prize for contributions to computer vision, 2022
NSF Graduate Research Fellowship, 2011
Fulbright Fellowship, 2010-2011

Selected Projects

Data Lead for >$100m Harnessing Plants Initiative (@ Salk Institute)
   Led software development for capturing, processing, and visualizing millions of plant biology data points
   Architected system with *cloud-based backend*, *desktop app*, *low-level hardware drivers*, and *web front-end*
   Successfully secured *$500k in internal funding*
   Tools: SQL, Typescript, Python, React, Electron, Supabase, AWS, Docker

Research in neuroscience & neural motor control (@ Salk Institute)

   Ran hundreds of *deep learning* and *reinforcement learning* experiments (TensorFlow, PyTorch, Docker)
   Created a *data management system* for organizing millions of images (Python, SQL)
   Wrote *performance-sensitive* software for multi-camera capture system (C++, Arduino)
   Developed *web frontend* and *containerized backend* (React, Docker, Flask, celery)
   Published a paper in **Nature Communications** and submitted a patent
   Other tools used: *version control* (git), 3D printing, Adobe Illustrator, reinforcement learning

Python library for porting Keras deep learning code to Apple Metal GPU (@ Body Labs)
   Translated Keras research code into *performant Apple Metal GPU code* (Python, Swift)
   Used in a production iOS app, acquired by Amazon

Humanoid robot control interface development (@ U. of Washington)
   Academic research on semi-autonomous robot control with vision and motion planning
   Technologies: C++, Qt, OpenCV, Pandas, CircleCI continuous integration

Personal software projects
   Time-tracking MacOS desktop application (Node.js, React, git, *CircleCI*)
   Websites and product experiments (*AWS*, *GCP*, Netlify, Gatsby.js, React)

Education

PhD *(incomplete)*, Computer Science - University of Washington, 2014-2016
MS, Computer Science – University of Washington, 2014
BS, Applied Math / Computer Science – Brown University, 2009 (*magna cum laude*)

Publications & Patents

https://scholar.google.com/citations?hl=en&user=Hg_y1pkAAAAJ

Five papers (three first author) in **computer science**
One paper (first author) in computing-related **neuroscience**
Two patents: one granted, one submitted

Professional references available on request.