Donelson Graham Berger

✉ donelsongrahamberger@gmail.com   🌐 dgberger.com   in linkedin.com/in/donelson-g-berger

Experience

Amazon Robotics, Grocery Automation
Software Engineer

February 2022 – Present
Seattle, WA

- Founding member on Amazon's alpha micro-fulfillment automation solution for Amazon Fresh deliveries
- Achieved 40% reduction in grocery picking expenses by leveraging serverless cloud architecture to create a low latency order tracking and robotic orchestration system
- Unblocked integration testing, by co-developing an event simulation testing service, before hardware availability
- Maintained CI/CD from alpha to production through Typescript, AWS, and operational dashboards, employing infrastructure-as-code methodologies

Banks Lab, Department of Anesthesiology
Undergraduate Researcher

March 2020 – December 2022
Madison, WI

- Demonstrated functional equivalence between non-random iEEG sub-samples and their fMRI counterparts using Diffusion Map Embedding, a non-linear dimensionality reduction technique
- Eliminated repetitive hyper-parameter turning experiments by creating a real-time data processing and visualising application, which processed over 40 patients and 300 GBs of data
- Ensured seamless project transitions with detailed onboarding materials and technical guides

Capital One, Card Teach-Machine Learning
Software Engineer Intern

June 2021 – August 2021
McLean, VA

- Learned Machine Learning Ops, working on a gradient boost machine learning model, which determined the likelihood of credit card debt repayment after six months of delinquency
- Optimized customer data ingest into machine learning models using Snowflake and Spark
- Orchestrated containerized service deployment utilizing Helm, Docker, and Kubernetes

AtomBeam Technologies
Software Engineer Intern

July 2019 – January 2020
Moraga, CA

- Automated all performance testing of AtomBeam's core services through Python and Boto3 SDK on AWS
- Reduced AWS cost by consolidating data storage

Programming Knowledge

Languages: Java, Python, Typescript, Go, C, HTML

Tools: AWS, Git, Docker, PyTorch, Spark, Tailwind CSS, Snowflake, Kubernetes

Publications and Presentations

Submission: Matthew I. Banks, Bryan M. Krause, **D. Graham Berger**, et al.
"Functional geometry of auditory cortical resting state networks derived from intracranial electrophysiology"

Conference Poster: **D. Graham Berger**, et al. "Comparison of functional geometry of cortical networks derived from functional magnetic resonance imaging (fMRI) versus intracranial electroencephalography (iEEG)", SFN 2021

Conference Poster: Matthew I. Banks, Bryan M. Krause, **D. Graham Berger**, et al. "Functional geometry of cortical resting state networks derived from intracranial electrophysiology", SFN 2021

Conference Poster: Declan Campbell, Bryan M. Krause, **D. Graham Berger**, et al. "Graph theoretic measures indexing arousal state transitions during sleep and anesthesia in human subjects", SFN 2021

Education

University of Wisconsin Madison
Bachelor of Science in Computer Science

September 2018 – December 2021
Madison, WI

Projects

League of Crafters

February 2023 - Present

- Tech lead of a five person team crafting a League of Legends type Minecraft server plugin
- Enabled parallel work streams by designing and implementing a Hexagonal software architecture

End to End Visual Story Generator

January 2023

- Created a text to video story generator by integrating GPT3, Stable Diffusion, and Text-to-Speech: Demo

Lunar Lander Reinforcement Learning

June 2021

- Implemented Actor-Critic, a reinforcement learning method, to solve LunarLander-v2 environment in OpenAI gym