

P. Nigel Brown

www.pnigelbrown.com | +17704037861 | pnigelbrown@gmail.com

Employment

Undergraduate Research Intern

San Diego Supercomputer Center | August 2018 - Present

- Benchmark and quantify acceleration of applications using GPUs on Comet to develop suggestions and best practices
- Develop and modify existing Singularity definitions and containers to accommodate SDSC users
- Create Popper pipelines with continuous integration for reproducible results of applications built with competing compilers and libraries

thinkLab Software and Hardware Engineering Intern

IBM Research - Yorktown Heights, New York | June 2018 - Present

- Designed and developed an interactive audio application with a server and API for the IBM Research Dataspace
- Built several demos to showcase IBM Research technology and teach concepts including Distributed Deep Learning, an Internet of Things robot, a millimeter wave Hyperimager, and an analog circuit Single Layer Perceptron Network

Undergraduate Research Intern

University of California, Berkeley | Center for Energy Efficient Electronics Science | June 2017 - August 2017

- Completed research measuring the anomalous Hall effect in Gadolinium Cobalt nanomagnetic dots for use in computer memory systems
- Designed experimentation setup using a current source, lock-in amplifier, and nanovoltmeter and automated data collection in LabVIEW
- Soldered and wirebonded samples to chip carriers and PCBs for device testing

Data Labeling Summer Intern

NVIDIA Corporation | June 2016 - August 2016

- Trained a deep neural network for autonomous vehicles in the automated driver assistance system (ADAS) project
- Labeled and performed quality control on thousands of images by identifying features to create a custom model
- Substantially improved performance of the model compared to all publicly available datasets

Freelance Sound Engineer

June 2011 - Present

- Record and mix talent in studios, in live venues, on film sets, and in post production
- Operate a business for repairing professional audio equipment and vintage high fidelity stereo equipment
- Graduated valedictorian of Sound Arts program at Ex'pression College
- Contributed to a GRAMMY award-winning album as a recording engineer

Education

University of California, San Diego

Bachelor of Science, Computer Engineering est. completion Spring 2020

Projects

Laney Supercomputing

C, Bash, Linux, Bazel

<https://bit.ly/2PwxZhK>

- Member of competition team sponsored by Cray and the Lawrence Berkeley National Labs, NERSC
- Built, ran, and optimized various scientific computing, modeling, deep learning, and benchmarking applications on various architectures and virtual machines
- Deployed weather modeling application to Azure CycleCloud and reproduced results on existing datasets

GitHub Campus Expert

- Support student events and hackathons as a student representative of GitHub
- Provide students access to resources to support the hacker ethos and build an active developer community

SafetyNet

Node.js

<https://bit.ly/2wBcbKR>

- Created a tool for streaming sites to help prevent people from committing suicide on a live stream
- Utilized IBM Watson Artificial Intelligence to turn speech to text and analyze the text for emotion
- Flags content and sends the streamer crisis resources when server-side mood conditions are met
- Awarded Best Use of IBM Watson at SiliconHacks 2017 by IBM

Local Hack Day

- Organized the first hackathon at Laney College in conjunction with Major League Hacking
- Selected altruism as hackathon theme and inspired numerous projects dedicated to its ideals
- Taught workshops on APIs and Version Control for first-time hackers

Technical Skills

Languages: Python, Node.js, C++, Java, LaTeX

Libraries | SDKs | Technologies: PyQt, pandas, Watson Developer Cloud, jupyter

Publications and Presentations

P. N. Brown, "Designing Interactive Audio Experiences for the IBM Research Dataspace," IBM Research AI & IBM Industry Research Summer Intern Poster Session, August 2018

P. N. Brown, A. El-Ghazaly, D. O'Mahoney, and J. Bokor, "Measuring the anomalous Hall effect on GdCo Nanodots," SACNAS – The National Diversity in STEM Conference, Salt Lake City, UT, 2017. <http://bit.ly/2yCupNK>

P. N. Brown, "Perception Testing - Spatial Acuity," 135th Audio Engineering Society Convention Paper
<http://bit.ly/2n3pGQK>