Norman Karr

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Education

University of California, Berkeley — Berkeley, CA
Bachelors of Arts: Computer Science, Physics — 8/2018–6/2022
- GPA: 3.55, Major GPA: 3.64
- Relevant Courses: Intro to Computer Vision and Computational Photography, Designing and Understanding Deep Neural Networks, Introduction to Machine Learning

Professional Experience

Berkeley Lab Physics Division — Berkeley, CA
Undergraduate Researcher — 1/2021-Present
- Independent researcher in Benjamin Nachman's lab studying the application of machine learning in particle physics
- Experimented with one-class classification techniques to detect anomalies in LHC collider data
- Designed mixture density networks to interpolate and generate particle jet data

Medtronic — Northridge, CA
Software R&D Intern — Summer 2021
- Developed production-level algorithms that operate on the next-generation continuous glucose monitors
- Refactored pre-existing programs to improve computational efficiency and memory usage
- Learned a new form of development known as model-based development to manage control algorithms

EECS Department Course Staff — Berkeley, CA
Reader/Tutor — 8/2020-5/2021
- Part-time Reader/Tutor for CS 170: Efficient Algorithms and Intractable Problems
- Hosted weekly office hours and aided in weekly discussion sections
- Produced supplementary video walkthroughs for students to better understand lecture topics, discussion problems, and previous exams

Medtronic — Northridge, CA
Software Test Intern — Summer 2020
- Full-time software test engineer for Medtronic's Diabetes division
- Designed vision algorithms to test graphical similarity and consistency across different interfaces
- Built script banks to automate functional testing of Bluetooth low energy communication

Intelllex — Singapore
Data Science Intern — Summer 2019
- Learned a new coding language on site to contribute directly to a NLP based classifier
- Designed and deployed two custom feature extractor layers within the classifier
- Applied NLP models to create specialized word embeddings across the vocabulary of law
- Produced complex and efficient data analysis algorithms large datasets and corpuses

Volunteering Experience

- **Academic Intern** at University of California, Berkeley — Fall 2020
  CS 61C: Great Ideas in Computer Architecture
- **Academic Intern** at University of California, Berkeley — Fall 2019
  CS 61B: Data Structures and Algorithms

Hard Skills

- **Coding Languages:** Python, R, Java, Matlab, C++
- **Software Development:** Computer Vision, Deep Neural Networks, Version Control, Software Lifecycle
- **Tools:** PyTorch, Sci-Kit Learn, SQL, AWS EC2, OpenCV, Pillow

Soft Skills

- **Collaboration**
- **Adaptable**
- **Independent**
- **Creative Problem Solving**
- **Research and Analysis**

Languages

- **English:** Native
- **Chinese:**
  Speaking: Fluent
  Reading/Writing: Intermediate