**MICHAEL LABARBERA**

Irvine, CA | (858) 395-0349 **|** [michael@labarbera.dev](mailto:michael@labarbera.dev) | <https://www.linkedin.com/in/michael-labarbera/>

**EDUCATION**

**University of California, Irvine |** Irvine, CAExpected Graduation 2024

* BS in Computer Science, Specialization in Networked Systems
* Relevant Coursework: Computer and Network Security | Machine Learning and Data Mining | Introduction to Data Management | Embedded Software | Design and Analysis of Algorithms | Data Structure Implementation and Analysis | Linear Algebra | Multivariate Calculus | Intro to Statistics | Principles of Operating Systems
* Languages: Russian – Intermediate
* GPA: 3.4

**TECHNICAL SKILLS**

* Programming Languages: Python 3, C, C++, Java, MIPS, x86, Lisp, Prolog, MySQL, HTML & CSS
* Tools: Scikit-learn, PyTorch, Matplotlib, NumPy, Pandas, Jupyter Notebooks, Wireshark, Bochs, Qemu, Git, WSL, Linux, Fusion 360, ARM Microcontrollers, Docker
* Skills: Cryptology, Network Security, Machine Learning, Database Construction and Querying, Algorithms and Data Structures, Object Oriented Programming, Embedded Software

**WORK EXPERIENCE**

**BrenTech,** *IT Technician* | San Diego, CA 2020-2021, 2023

* Assisted clients with diverse IT needs through phone and remote support, diagnosing and solving technical challenges in a timely and professional manner.
* Streamlined workflow to minimize project lag during shift transitions, resulting in a 20% improvement in resolution time.
* Problem-solved hundreds of unique hardware and software repairs on a variety of platforms, including Windows, MacOS, Microsoft Exchange Server, and SonicWall Networks.
* Assisted in web-development with technologies such as Shopify, HTML & CSS, MySQL, and PHP.
* Maintained professional relationships with clients, ranging from national-scale corporations to local business owners.

**PROJECTS & LEADERSHIP EXPERIENCE**

**Database Management System,** *C++* 2024

* Built an efficient, memory-friendly, database manager for a relational database that supports querying, multiple data types, B+ tree indexing, and variable length records.
* Implemented a memory-efficient page manager that ensures that higher-level API calls utilize only a single page of memory, irrespective of the database file size. This design significantly enhances performance and scalability.
* Reduced individual attribute lookup times by up to 80% by implementing page and record directories, optimizing lookup times from to .
* Tested and debugged using GoogleTest, GDB, and Valgrind.

**Street View House Number Classifier,** *Python 3* 2024

* Collaborated with a team to produce a deep learning model and a write-up about the technical specifics.
* Developed and tested a classifier using PyTorch and Matplotlib to determine the digit of house number images.
* Trained on the Stanford Street View House Number dataset - <http://ufldl.stanford.edu/housenumbers/>
* Achieved an accuracy of 85% using a 7 layer forward-feed Neural Network and Stochastic Gradient Descent optimization with Nesterov Momentum.

**Irvine Rowing Club,** *Varsity Oarsman, Safety Officer* | Irvine, CA 2021-2024

* Responsible for leading the medical response in the event of an emergency.
* Mentored novice oarsmen, lead practices as a stand-in coxswain while injured, and helped coaches with the maintenance of our $250K fleet.
* Achieved first place in the Novice Lightweight four category at the American Collegiate Rowing Association (ACRA) national championship in 2022.