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| Joaquin Carretero  **Bachelor of Science in Computer Engineering**  Books University of New Mexico - May 2020 - GPA 3.43  Marker Berkeley, CA, 94706 | CONTACT   * (505) 930 4208 * [quinocarreteromartinez@gmail.com](mailto:quinocarreteromartinez@gmail.com) * 1050 Kains Ave. Albany, CA, 94706 * [LinkedIn](https://www.linkedin.com/in/joaquin-carretero-martinez-166954176/) * [GitHub](https://github.com/miniquinox/Portfolio) |

**Skills:**

* Programming languages: Python, C, C++, SQL, BASH.
* Software Engineering Fields: Artificial Intelligence, Neural Networks, Machine Learning, Avionics, Back-End.
* Software: Keras, Tensorflow, Numpy, OpenCV, CUDA, JSON, Linux, UNIX, Git, SVN, ssh, CAD, Fusion360, Shapr3D, Unity, Photoshop, Lightroom, Microsoft Office.
* Knowledge: Mathematics, Computer Logic Design, Probabilistic Methods, Algorithms, Signals and Systems, Operating Systems, Circuit analysis, Microprocessors, Electronics, Optical Photography, Algorithms, Convolutional Neural Networks, Script automation.
* Spoken languages: Spanish and English (bilingual)

**Education:**

* **University of New Mexico, Albuquerque, NM Aug 2016 to May 2020**
* Bachelor’s Degree, Electrical and Computer Engineering, GPA-3.43
* Coursework: Mathematics, Computer Logic Design, Probabilistic Methods, Algorithms, Signals and Systems, Operating Systems, Circuit analysis, Microprocessors, Electronics, Computer Vision, Optical Photography.

**Professional Experience:**

**Uniquify Oct 2020 to Jan 2021**

**Neural Network Engineer Intern**

* Training and fine-tuning Deep Learning Neural Networks with Machine Learning frameworks such as TensorFlow, Numpy, CUDA, and OpenCV with Python 3.6.
* File management automation scripting with BASH and Python in Linux environment via ssh connection to build and organize neural networks on several datasets such as ImageNet, CIFAR10, MNIST, COCO2017, etc.
* Recreated TensorFlow from scratch to build a proprietary library faster and more efficient, implementing Keras with newer versions of famous models like VGG16, Resnet50, Inception and DenseNet.

**SeaSkate Startup May 2020 to Oct 2020**

**Software Engineer**

* 3D modeled a wheelbase structure for a new kind of surfboard-shaped skateboards by applying my physics and math knowledge and 3D printing skills.
* Software: Fusion 360, Ultimaker Cura 2.0, Shapr 3D
* Hardware: Formlabs 1+ Resin 3D printer and Prusa i3 MK3 Filament 3D printer.

**Aspen Avionics May 2019 to May 2020**

**Software Engineer intern 🡪 Software Engineer**

* C and Python code review and documentation of test requirements.
* Assisted with software identification, Code Coverage, and requirements checks.
* Developed code verification by analysis procedures for a DO-178 B Level C project, using languages such as Python, C, Shell, and BASH and interacting with hardware for tests.
* Debian package removal and OS cleaning for minimal storage and functionality for Avionics systems.
* Script automation to run multiple python programs at a time sequentially as well as file management automation.

**Crownpoint Healthcare Aug 2019 to May 2020**

**Software Engineer**

* Programmed a scheduling algorithm for Crownpoint Healthcare Facilities to easily schedule people's work schedules in different clinics and hospitals with 30+ working alternatives such as managing whether people work in different clinics, primary/urgent care, weekends/location preferences, etc.
* Information was read from a JSON file, structured and retrieved with C++, and exported to .csv format to be human-readable and used with Excel.

**University of New Mexico Jul 2018 to Apr 2019**

**Python Instructor**

* Python instructor through the University of New Mexico at Washington and Polk School in Spanish and English to bilingual students.

**Engineering Projects:**

**QUANSER May 2019 to May 2020**

* Senior Design project in which we program drones to follow flight paths to make art (Self-controlled by an algorithm we are making beforehand). Drones were programmed to lift objects and use them to draw or project onto surfaces to, later on, showcase the work. I made an image processing program for Quanser to take the Standard deviation of a compound of images to create a shade trace.

**FSAE (Formula Society of Automobile Engineers) May 2019 to May 2020**

* 3D designed the battery structure of the 2020 Electric FSAE UNM racecar with AutoCAD using precision tools for measuring. Batteries were designed for optimal material use.

**WHY Lab, University of New Mexico May 2018 to May 2019**

* Fully designed and 3D printed a car working with AutoCAD and Prusa 3D printing software, then added complete functionality to be remote-controlled with an electric rear-wheel-drive battery using a 2.4GHz connection to control it.

**University of New Mexico May 2018 to Dec 2018**

* Programmed a Calculator simulator with LabView implementing each of the operations such as addition and exponential and being able to handle properly cases like 0/0. The result was a fully functional calculator with its GUI exported into a .exe file usable on any 32-bit windows machine and up.