

# Francisco J. Mata Carlos

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Academic Webpage

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## EDUCATION

**Master of Science in Electrical Engineering** Currently Pursuing  
University of Nevada Las Vegas - Las Vegas, NV  
**Bachelor of Science in Electrical Engineering** May 2020  
University of Nevada Las Vegas - Las Vegas, NV  
**Diploma as Apprentice Electrician** November 2014  
Advance Training Institute – Las Vegas, NV

## WORK EXPERIENCE

**Research Assistant** December 2016 – current  
University of Nevada Las Vegas, Dr. Baker Research Group

- Collaborate with graduate and undergraduate students to finish projects. Assist with PCB designing and testing equipment to test chips. Wirebond chips using K & S 4526 Manual Wire Bonder and populate components on PCB's. Design and 3D print different components using different CAD tools and Lulzbot mini printer, which are partly used on testing equipment.

**Electrical Engineer Intern** August 2018 – current  
Vorpall Research Systems LLC

- Responsible for proper use of product equipment such as stencil printer, pick and place machine, scanner, and reflow oven. Inspect PCB prototypes and solder components if needed.

**Solar Installer** August 2014 – December 2015  
SolarCity, Las Vegas, NV

- properly read and understand the installation plans and blueprints. Set up safety measures at each jobsite and identify safety hazards. In charge of crews on the roof to make sure proper installation according to plans and measurements are met. Mount electrical equipment, inverters, run conduit, and wired all equipment regarding electrical plans.

**Licensing Petty Officer** January 2010 – June 2014  
Navy/Marine Corps Reserve Center

- Specialized as an Equipment Operator for unit NMCB 17 under the NAVY and NAVY Reserve and oversaw the Licensing Department for that unit at Nellis Air Force Base.

## MILITARY SERVICE

July 2006 – June 2014

**Service Country:** United States | **Branch:** Navy | **Rank:** E-5 | **Rate:** EO2 (Equipment Operator, 2<sup>nd</sup> Class Petty Officer)

**Deployment:** Deployed to Iraq from March 2008 to October 2008 – Served during Operation Iraqi Freedom

### Significant Military Projects

- **USAF Academy Project, Colorado Springs** - worked 360 man-hours with Air Force SSgt in charge using Air Force equipment to complete barracks for cadet training.
- **USAF Command Airlift Control Flight** - Supported training and conducted over a 60-hour mount out of airlift of 17 pieces of heavy and military equipment totaling over 770,600 pounds, and 93 personnel. Helped with equipment preparation, joint inspections, and simulated combat on-loads and off-loads of C-17, C-5 and C-130.
- **USMC and US Army contracts** - spend over 35 hours working on an intra-service contract with the Marines and Army to utilize HMMWVs, MTRVs and other equipment for training exercises.
- **Land Navigation Course** - utilized over 40 hours coordinating land navigation training using Air Force training site, Camp Cobra.

## TECHNICAL SKILLS

**Electrical skills** – PV installations, motor control and logic diagrams, circuit designing, testing, and debugging

**Heavy and light equipment operations** - Have worked and trained with different size construction equipment

**Leadership skills** – Have served as a Squad Leader, unit leader, project leader, and have overseen several assignments, as well as military groups

**Communication skills** – Bilingual (Fluent in English and Spanish; writing, speaking, and reading) excellent communication skill within the Chain of Command and subordinates

**Computer skills** – Microsoft Word, Excel, PowerPoint, C++, Atmel Studio (ATmega328P)

**EDA tools** – Cadence Virtuoso

**Simulation tools** – LTSpice, Cadence Spectre

**Bonding skills** - K & S 4526 Manual Wire Bonder

**PCB skills** – FreePCB, CircuitMaker and Altium tools

**CAD tools** – OpenScad, Solidworks

**Soldering Skills** – surface mount and through hole components