

# PAUL DANIEL MENDES

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## SOFTWARE ENGINEER / SOLUTIONS ARCHITECT

I have a passion for solving problems and helping people. I've worked on small teams for most of my career involved in every part of a projects life-cycle. From 3d printers, to automated trading, to industrial retrofits; I have cooperated in a plethora of projects that always kept me learning. Currently, I provide automated trading solutions and spend most of my free time teaching myself new skills.

### KEY AREAS OF EXPERTISE

- Fullstack Development
- Python, PLC, Bash, HTML/CSS
- API's & Web Scraping
- Git & Version Control
- Embedded Devices (RPI, PIC, MicroC)
- UNIX/Linux, Mac, Windows, VM
- Software/Hardware Integration
- Circuit Troubleshooting & Repair
- Problem Solving
- Experimental Design & Analysis
- Quantitative Methods
- Business Intelligence
- Statistical Inference & Modeling
- Data Mining/Munging
- Data Analysis/Visualization
- Database Management
- Engineering Economics
- Finance

### TECHNICAL SKILLS OVERVIEW

#### EMBEDDED C | 2 YEARS

- ❑ Microchipsets PIC16/32, RaspberryPi
- ❑ Prototyped and designed custom 3d printers
- ❑ Integrated software/hardware solutions
- ❑ UART Communication/Wireless data transmission
- ❑ Voltage Regulation/Circuit Programming
- ❑ Automation & Control
- ❑ RAM/ROM & I/O Peripherals

#### DEVOPS | 2 YEARS

- ❑ Cron jobs, startup scripts, login scripts
- ❑ Regex, Piping, Alias, standard i/o
- ❑ Performance optimization
- ❑ System management
- ❑ Docker, AWS, Git, Virtualbox

#### C++ | 1 YEAR

- ❑ GUI development
- ❑ Machine code integration
- ❑ MQL4 automated trading

#### HTML/CSS | 2 YEARS

- ❑ Static Website Design
- ❑ Dynamic CSS

#### JAVASCRIPT | 4 MONTHS

- ❑ Google doc/sheet scripting

#### PYTHON | 2 YEARS

- ❑ Jupyter notebooks, pandas, matplotlib, seaborn, plotly, bokeh, numpy, sklearn, scipy, keras, tensorflow, requests, selenium, multiprocessing, nmap, xml, urllib, pyQT5, BS4, Flask, Django.
- ❑ Data wrangling/visualization/statistics/analysis/deep learning
- ❑ API Rest/JSON/XML integration, web scraping, chat bots, Automated trading bots, GUI development
- ❑ Much More...

#### DATABASE | 2 YEARS

- ❑ SQLite, MySQL, PostGreSQL, Redis
- ❑ Database design, migrations, schema
- ❑ ETL, CRUD

#### PLC | 2+ YEARS

- ❑ Ladder logic programming for small and large automated systems.
- ❑ HMI programming and design.
- ❑ Troubleshooting and retrofitting industrial automation systems.

#### OPERATING SYSTEMS | 5+ YEARS

- ❑ Kali Linux, Ubuntu, OpenWrt, Raspbian, LibreELEC
- ❑ Apple MacOS
- ❑ Microsoft Windows XP/7/8/10/CE

#### VERSION CONTROL | 1 YEAR

- ❑ Git, github, venv, anaconda, virtualbox

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## WORK EXPERIENCE

### SOFTWARE ENGINEER • FREELANCER.COM/UPWORK.COM, Online

Jan 2018 – Now

Python programming, data analysis, embedded device troubleshooting, automated trading. I am a TOP RATED Freelancer with 100% positive feedback rating.

- Programming client applications to specification
- Finding solutions for specific problems and resolving them independently.
- Project research, time management, customer relations.
- Automated Cryptotrading robots.

### ELECTRICAL ENGINEER • PLASSER AMERICAN, Chesapeake, VA

July 2017 – Dec 2017

Managed the electrical department and promoted relationships between disassociated departments.

- Soldering, troubleshooting, calibration and repair of transducers, pcbs, motors, lasers and integrated software.
- Design and testing of embedded communication systems. Canbus/RS-232/TCP/IP
- Python Programming
- Acting liaison between Electrical, Engineering, Management, R&D, QC and Service departments.

### OVERNIGHT CLOSER • PLANET FITNESS, Salt Lake City, UT

Feb 2017 – July 2017

I took on this part-time job while working in SLC specifically because of the overnight shift. I was able to earn a small income and teach myself new skills during downtime. I used this time to code, educate myself and plan my days and weeks ahead all while completing my assigned duties.

- Greet members, prospective members and guests, providing exceptional customer service.
- Handle all front desk related activities.
- Assist in maintaining the neatness and cleanliness of the club. Close shift for that business day.

### INVESTMENT MANAGER • PRIVATE, Salt Lake City, UT

Nov 2016 – Jan 2018

Created and managed a private fund and day-traded/invested \$5,000 into \$250,000. Through research, spreadsheet programming and risk-management.

- Extensive research of assets within crypto, blockchain and forex markets. Including network security and safe capital management.
- Google Drive Spreadsheet scripting and form creation for structuring daily routines and asset management.
- Cyber Security network auditing and penetration testing.
- Pine Script development for custom forecasting indicators.
- C++ development in generation of automated trading built into Metatrader terminal.

### FOREX ANALYST/ASST. ACCOUNT MANAGER/ASST. TUTOR • PROWAVE TRADING, Online

Jan 2016 – June 2017

Created and managed a private fund and day-traded/invested \$5,000 into \$250,000. Through research, spreadsheet programming and risk-management.

- Daily Asia and London chart analysis for online trading group
- 6 week training course assistant instructor
- Multi managed spot and option forex account.
- Developed new trading techniques and data compilation.

### EMBEDDED ENGINEER • IAS CORP, Hampton, VA

Nov 2015 – Nov 2016

Freely regulated project coordinator combined with embedded and software engineering, fully responsible for assigned projects in their developmental stage and support thereafter. Autonomous expertise supplemented by prioritizing multiple-assignments

- Developing and integrating user-friendly, software-controllable PCB hardware into embedded systems.
- Providing provisional support and troubleshooting.
- Choreographing across departments to satisfy deliverables; collaborating with machine shop, administrators, manufacturers, suppliers and engineers.
- Constructing PLC hardware systems and developing appropriate ladder logic.

### MAINTENANCE TECHNICIAN • EPICO USA, Cornish, ME

Aug 2014 – Dec 2014

Charged with performing periodic preventative and reactive maintenance of 5 Hydro-plants including adjusting power factor of generators; conducted oil and water filter changes on generators; performed fault finding diagnosis, rebuilds, upgrades, modifications, rewires and root cause analysis on equipment; carried out staff hiring and training

- Undertook daily inspections of 5 plants through monitoring oil levels/ spills/ filling water filters, cleaning passageway intake, visual inspection of dam and adjusting power factor for maximum efficiency.
- Delivered dedicated support to the manager during staff recruitments and propelled expansion of company throughout the New England region.
- Accountable for ensuring generators are connected 24/7 and performed reconnection to grid during shut off in storms.

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## **EDUCATION BACKGROUND AND TRAINING**

**Bachelor of Electrical Engineering Technology** - University of Maine, Orono, ME (2015)

**Associate of Electrical Engineering Technology** - SMCC, South Portland, ME (2013)

**Licensed Engineer In Training | Electricians helper**

## **ONGOING EDUCATION**

**Web Programming with Python and JavaScript** - Harvardx - CS50 - October 2019

**Network Security** - RITx - CYBER504x - October 2018

**Deep Learning Fundamentals with Keras** - IBM - DL0101EN - October 2018

**Building Dynamic Websites** - Harvardx - CS75 - July 2018

**Data Analyst w/Python** - Dataquest.io - June 2018

**Automate The Boring Stuff with Python** - Book - Nov 2017

**Blockchain for Business - An Introduction to Hyperledger Technologies** - LinuxFoundationX - LFS171x - Oct 2017

## **EXTRACURRICULAR ACTIVITIES**

**Python757 - Meetup Group**

**Norfolk Data Science - Meetup Group**

**Community TA: Data Science Productivity Tools - HarvardX**