TRENTON **MCKINNEY**

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Email · LinkedIn Profile · GitHub · Stack Overflow · Personal

As a test engineer, I have focused my attention upon automating tests and analyzing data with python. I enjoy solving problems and continually expanding my knowledge of python and testing methodologies. These tools and automation, produce benefits with increased measurement accuracy, precision and testing throughput. Data are only as valuable as the insights gleaned from analysis and I excel at using the python data science software ecosystem and tools such as Excel and Tableau for data analysis, visualization and storytelling.

SKILLS

- Data Analysis
- Python · R
- OOP – Object Oriented Programming
- Jupyter Lab – Pandas · Matplotlib
- Data Visualization, Matplotlib, Bokeh
- JetBrains PyCharm
- Tableau
- Electronic Hardware Testing
- Electronic Device Characterization
- Signal Integrity Testing
- Test Plans
- Excel – Power Query · Power Pivot · DAX
- SQL · mySQL · ETL
- Statistics · Linear Algebra · Calculus · Differential Equations
- Data Munging
- Microsoft Office
- GitHub
- Machine Learning
- Electronics Lab Equipment
- Functional Testing
- Validation Reports

EDUCATION

BACHELOR OF SCIENCE ELECTRICAL ENGINEERING, PORTLAND STATE UNIVERSITY

NOVEMBER 2018 · UDACITY
DATA ANALYST NANODEGREE – STATISTICS, PYTHON, JUPYTER, MACHINE LEARNING, TABLEAU, R, SQL, DATA ANALYSIS, DATA WRANGLING

OCTOBER 2018 · COURSERA – UC SAN DIEGO
INTODUCTION TO BIG DATA (HADOOP)

JUNE 2018 · DATACAMP
PYTHON DATA SCIENCE TOOLBOX (PART 1 & 2) · INTRO TO PYTHON FOR DATA SCIENCE · INTERMEDIATE PYTHON FOR DATA SCIENCE · IMPORTING DATA IN PYTHON (PART 1 & 2)

APRIL 2018 · COURSERA
MACHINE LEARNING

JULY 2017 · EDX
DAT206X: ANALYZING AND VISUALIZING DATA WITH EXCEL

SEP - DEC 2015 · COURSERA
USING DATABASES WITH PYTHON · USING PYTHON TO ACCESS WEB DATA · PROGRAMMING FOR EVERYBODY (GETTING STARTED WITH PYTHON) · PYTHON DATA STRUCTURES

EXPERIENCE

2017/04 – 2018/10

HARDWARE ENGINEER, INTEL

· 18 Month contract complete – Reference from manager on LinkedIn
· Produce test plans for the thorough validation of Ethernet network cards.
· Test network cards with a combination of custom automation and bench testing.
· Implement automation to the data analysis process with python and Excel.
· Summarize test results with an electrical validation report.
· Wrote and implemented new waveform post-processing automation with python, Jupyter Lab and Pandas to:
- ► Organize data generated by testing to ascertain the completeness of test coverage.
- ► Produce waveforms and waveform analysis from the raw waveform test points.
- ► One test of 3 DUTs produces 1.7B+ rows of data which is used to generate 1500+ waveform figures.
- ► Figures are either individual waveforms or groups of waveforms
- ► Individual waveform measurement figures are each divided into four subplots showing:
  - (1) full waveform
  - (2) rising edge (tested for monotonicity)
  - (3) ringing
  - (4) steady state. Out of spec data are masked red.
- ► Combined figures may include:
  - (1) startup of all test points plotted to verify sequencing
  - (2) test points and slew rate and
  - (3) DUT and test point to name a few combinations.

2014/04 – 2014/11

TEST ENGINEER, OXFORD GLOBAL RESOURCES · EVEREST CONSULTANTS, INC.

· Automated functional verification of the Rohde & Schwarz CMW500 with python.
· Functional verification of HIDs, PIR sensors, cameras and NFC devices within Perceptive Pixel (aka Surface Hub).
· Increase hardware and software test throughput by automation with Python.
· Data analysis with Python.

2013/11 – 2014/04

RF TEST ENGINEER, SUMMIT SEMICONDUCTOR

· Contract - Reference from manager on LinkedIn
· Implemented automation with python scripting, which increased hardware test throughput of wireless transmitter (RF) gain control characterization. Increased data allowed for the modeling of the device with linear regression.
· Data analysis with Python and Excel.

2012/10 – 2013/06

SIGNAL INTEGRITY ENGINEER, INTEL

· Contract - Reference from manager on LinkedIn
· Implemented new signal integrity test automation with python to:
  · Control and synchronize thermal controller, noise generator, oscilloscope, 72 port RF switch, voltage controller, BERT scope and device under test to characterize Intel CPU
  · Reduced a 20-minute manual test process to 3 minutes.
  · Increase to the stability of the automation software, was able to reduce the BER testing by up to 4 days.
· Increase hardware test throughput by automation with Python.
· Data analysis with Python and Excel

PROJECTS

- Machine Learning – Predict Persons of Interest in the Enron data set
- Prosper Data Exploration and Visualization - R
- Excel Automation with Python
- Wordcloud with Python and Matplotlib
- Titanic Survival Feature Analysis – A Tableau Visual Exploration
- Wrangle OpenStreetMap Data (ETL Project) - Python & SQL
- Investigate the Titanic Dataset - Python & Jupyter Notebook
- Test a Perceptual Phenomenon - Statistical Analysis w/ Excel