

# Matthew J. Preisendorfer

SOFTWARE ENGINEER

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## Career Objective

Producing efficient and effective software solutions. Highly skilled in Python. Over 8 years of government contractor experience (4+ years unmanned aerial systems, 4+ years OSINT technologies). Great problem-solving and troubleshooting skills, ability to quickly learn new ideas/tasks. Widespread understanding of topics and related areas within computers, networks, and related hardware. Great interpersonal skills, works well with others.

## Skills

Software Development  
Python  
Continuous Integration

UAS Technologies  
Machine Learning / AI  
Automation

OSINT  
Data Pipelines  
Linux Systems

## Education

### Masters of Science (MS) of Computer Information Science

STATE UNIVERSITY OF NEW YORK (SUNY) POLYTECHNIC INSTITUTE

Utica, NY

Jan. 2017 - Jan. 2018

### Bachelors of Science (BS) of Computer Information Science

STATE UNIVERSITY OF NEW YORK (SUNY) POLYTECHNIC INSTITUTE

Utica, NY

Aug. 2013 - Dec. 2016

## Experience

### Federal Data Systems LLC

SOFTWARE ENGINEER

Columbia, MD (Remote)

March 2020 - Nov. 2024

- Develops software solutions for various Open Source Intelligence projects.
- Collects, maintains, and analyses historical data for customers.
- Build and support analytical tools for customers.
- Heavy focus on Python and Bash scripting.
- AI/ML integration

### AX Enterprize LLC

SOFTWARE ENGINEER

Yorkville, NY

Aug. 2015 - March 2020

- Develops software solutions for various hardware and their associated projects. Projects are associated to contracting for the AFRL (Air Force Research Lab), NASA, DoD, NUAIR, and more.
- Projects focused on Unmanned Aerial Systems (UAS) and their integration into the national airspace (UTM).
- Developed software with Python, C, C++, and bash-scripting.
- Network programming and network based technologies.
- Maintain infrastructure at NY UAS Test Site in Rome, NY.

### Rsignia

CONSULTING DATA SCIENTIST (PART-TIME)

Rome, NY

July 2017 - Nov. 2019

- Gathered, cleaned, normalized datasets for human intelligence from a variety of Open Source data feeds. Analyzed data to determine trends and carve out items of interest to the customer. Prepared reports and spreadsheets with the resulting data. Designed code for automating processes.
- Office of Inspector General/Department of State Data Analysis Program

### SUNY Polytechnic Institute

GRADUATE RESEARCH ASSISTANT

Utica, NY

Jan. 2017 - Jan. 2018

- Assist a faculty member with a research project which can include engaging in literature searches; preparing bibliographies; assisting with experimentation; compiling, processing and analyzing data; performing various clerical and editorial duties relating to the research.

- Maintains 100% accountability of IT assets for the institute. Manages trouble tickets for faculty, repairs and replaces equipment for employees and students. Assist with customer service problems. Installation of computer hardware and software.

## Projects

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### Bird Identification Tool

Syracuse, NY

SKILLS: TENSORFLOW, FASTAPI, CI/CD, QUASAR, GIT

Nov 2024 - Present

- Python tool that can identify birds by sound using Cornell's BirdNet.
- Detections are saved as JSON data for analysis in real time.
- FastAPI web-server displays data visualizations.

### Social Media Emoji Analysis, Correlations and Trust Modeling

Utica, NY

DOI 10.13140/RG.2.2.25466.18888

Jan 2017 - Jan - 2018

- The objective of this research is to gather large amounts of Twitter data and analyze emojis used to find correlations in societal interactions, and how a trust model can be used in conjunction with pre-existing models to improve success rates.
- By creating topic models for each user and comparing it with the emoji distribution analysis, a trust 'fingerprint' can be created to measure the authenticity or genuineness of a given user and/or group of users.
- The emoji distribution analysis also provides the possibility of demographic predictions.

### Cyber Defence Network Adapter

Utica, NY

SKILLS: MALWARE DETECTION, PROJECT ENGINEERING

Mar 2016 - Jan 2021

- Cyber Defense Network Adapter (CDNA) is an in-line device that carves executables from network packets.
- After malicious strings have been identified; files are removed, and the IP address from which the traffic originated is blocked.
- Stops the malicious traffic in transit to your computer.

## Honors & Awards

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Mar. 2019 **Finalist**, AFRL Commercialization Academy

Rome, NY

2015-2017 **SUNY Polytechnic Institute President's List**, Multiple Semesters

Utica, NY

May 2016 **Scholarship**, AFCEA Erie Canal Chapter SRC / SRCtech Scholarship

Rome, NY

April 2016 **Winner**, SUNY Polytechnic Institute Student Project Showcase

Utica, NY

Aug. 2013 **Scholarship**, SUNY Polytechnic Institute Academic Scholarship

Utica, NY

May 2013 **Coin**, Rochester Institute of Technology Computing Award

Rochester, NY

## Relevant Contracts

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### JCETII

The purpose of the Joint Capability Embedded Technology Insertion and Integration (JCETII) Task Order (TO) is to expand upon current ISR and cyber capabilities to supply the DoD with leading capabilities and technologies for observation, visualization, and collaboration among tactical, operational, and strategic war fighting echelons.

### CLUE

Development and assessment of UTM architecture and UAS technologies for the DOD. Integration of technologies at the NYUAS Test Site in Rome, NY.

### NASA(01-06)

Development of UAS technologies and integration testing of NASA UTM components. Participation in multiple testing phases (TCL1-TCL4).

### NINJA

Advancement of C-UAS systems for DOD.

### PATRIOT

Cyber-vulnerability testing of IOT devices for DOD.