

# Matthew J. Preisendorfer

COMPUTER INFORMATION SCIENCE

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## Capability

Producing efficient and effective software solutions. Highly skilled in Python. MS of Computer Science. 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.

## Competencies

Software Development  
Python  
Data Pipelines

UAS Technologies  
Continuous Integration  
Linux Systems

OSINT  
Machine Learning / AI  
Mobile Networks

## Education

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

Utica, NY

STATE UNIVERSITY OF NEW YORK (SUNY) POLYTECHNIC INSTITUTE

Jan. 2017 - Jan. 2018

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

Utica, NY

STATE UNIVERSITY OF NEW YORK (SUNY) POLYTECHNIC INSTITUTE

Aug. 2013 - Dec. 2016

## Experience

### Federal Data Systems LLC

Columbia, MD (Remote)

SOFTWARE ENGINEER

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

Yorkville, NY

SOFTWARE ENGINEER

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 Unnamed 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

Rome, NY

CONSULTING DATA SCIENTIST

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

Utica, NY

GRADUATE RESEARCH ASSISTANT

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.

## 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.

## Projects / Posters

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### Social Media Emoji Analysis, Correlations and Trust Modeling (DOI 10.13140/RG.2.2.25466.18888)

*Utica, NY*

*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 current events may drive social media interactions and behaviors. By creating topic models for each user and comparing it with the emoji distribution analysis, a trust "fingerprint" can be created to measure authenticity or genuineness of a given user and/or group of users. The emoji distribution analysis also provides the possibility of demographic predictions. Analysis is not limited to Twitter of course but is used here because the API is free and generally easy to use. This paper aims to prove the validity of emoji analysis as a method of user identification and how their trust models can be used in conjunction with pre-existing models to improve success rates of these models

### Cyber Defence Network Adapter

*Utica, NY*

*March. 2016*

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 from is blocked. The issue faced today with antivirus, antispayware, and antimalware scanners is that malicious code has to be on your physical computer before it can be identified. Roughly 32% of computers in the world are infected with a form of malware. CNDA stops the traffic in transit to your computer, therefore your computer remains virus free! Anyone with a computer can benefit with CDNA, the code is not operating system specific so viruses created for Mac OSX will be detected in-line the same way viruses for Windows are detected. This leaves the end user worry free from viruses.