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	UAS Technologies	OSINT
Python	Machine Learning / AI	Data Pipelines
Continuous Integration	Automation	Linux Systems

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.

SUNY Polytechnic Institute
Utica, NY

ITS HELP DESK STUDENT TECHNICIAN
Jan. 2014 - May 2017

- 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

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

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

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.