

Kyle Protho, MS

Open Source Intelligence | Investigations | Network & Link Analysis

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PROFESSIONAL SUMMARY

Intelligence analyst with 10+ years conducting open source research and investigations and producing written analytical products across financial crime (AML, sanctions, terrorism financing) and regulated healthcare. Formally trained in intelligence analysis (MS, Applied Intelligence, Mercyhurst University), with a master's thesis applying social media network analysis to map criminal organization structure and identify potential new members. Investigates actors behind flagged activity, validates sources and evidence before findings reach decision-makers, and states analytical confidence explicitly rather than presenting a single guess. Pairs investigative tradecraft with SQL and Python to correlate large datasets quickly, and writes concise, defensible reports and daily briefs for leadership.

CORE COMPETENCIES

- **Investigations & Tradecraft:** Open source intelligence (OSINT), open-source investigations of individuals and entities, financial investigations, sanctions and fraud typologies, AML / terrorism-financing risk, escalation judgment
- **Network & Entity Analysis:** Social media network analysis, link and relationship analysis, identifying actors and organizational structure, pattern and trend analysis, geopolitical and transnational crime analysis
- **Analytic Rigor:** Source and evidence validation, stating analytical confidence, uncertainty quantification (Monte Carlo simulation), control testing, audit-ready documentation
- **Intelligence Products:** Investigative findings reports, daily intelligence briefs, executive briefings, risk assessments, interactive visualizations
- **Technical:** SQL, Python, R, Power BI, Excel, Power Automate, predictive modeling, anomaly detection, geospatial clustering, LLM-assisted analysis

PROFESSIONAL EXPERIENCE

UPMC Health Plan | Pittsburgh, PA

December 2022 – Present

Senior Quality Improvement Analyst

- **Decision Support Under Uncertainty:** Designed a risk management tool using predictive modeling and Monte Carlo simulation in Python that gives leadership a probabilistic view of risk with explicit confidence levels instead of a single-point estimate; used by Medicare and Medicaid business leaders to set CMS and NCQA Stars targets.
- **Automated Reporting:** Rebuilt a manual reporting workflow end-to-end in Power Automate, cutting turnaround 96% (20 hours to 45 minutes) and saving \$12,000+ per year.
- **Executive Communication:** Translate complex metrics from SQL and Python analysis into clear Power BI visualizations and insights that leadership can act on.

BNY Mellon | Pittsburgh, PA

August 2021 – December 2022

Vice President, Specialist – AML Compliance & Controls

- **Control Testing:** Evaluated AML control efficacy and scope against regulatory standards and anti-money laundering laws, using SQL and Python to examine scope of screening controls.
- **Compliance & Documentation:** Identified control deficiencies and partnered with business units to strengthen documentation and deliver audit-ready remediation.

UPMC Health Plan | Pittsburgh, PA

February 2019 – August 2021

Strategy Analyst

- **Open Source Research:** Ran OSINT and market intelligence research to test clinical service concepts against market reality before they reached leadership.
- **Data Correlation:** Analyzed member claims data in SQL, R, and Python to identify which population health strategies were worth pursuing.

PNC | Pittsburgh, PA

August 2018 – February 2019

Sanctions Analyst

- **Financial Investigations:** Assessed flagged entities and suspicious payments against sanctions and fraud typologies, judging which patterns warranted escalation to detect fraud and sanctions evasion.

ICO Alert / Nicopure Labs | Pittsburgh, PA / Tampa, FL

November 2017 – July 2018

Research Analyst / Market Intelligence Analyst

- **Intelligence Program Design:** Built two OSINT-based intelligence programs from scratch to monitor competitors, industry developments, and market conditions.
- **Daily Intelligence Briefs:** Researched, wrote, and published the ICO Alert Crypto Minute, a daily decision-ready brief on blockchain trends read by hundreds of subscribers.

Western Union | Denver, CO

June 2015 – March 2017

AML Risk Assessment Analyst

- **Open-Source Investigations:** Investigated parties involved in flagged transactions using open sources and wrote findings reports assessing which leads held up.
- **Threat & Risk Analysis:** Analyzed transnational crime patterns and geopolitical risk to forecast money-laundering and terrorism-financing vulnerabilities across every country of operation.
- **Visualization:** Designed an interactive Excel-based infographic giving AML compliance leadership a single view of risk assessments for all countries Western Union operated in.

INTELLIGENCE RESEARCH & PUBLICATIONS

- **Criminal Organization Structure (Master's Thesis):** Assessed organizational structure and identified potential new members of criminal organizations by applying network analysis to Twitter follower links.
- **Moving Money for Better:** Authored a panel abstract on the role of transactional data analytics in Western Union's initiative to identify and disrupt human trafficking networks.
- **Analysis ToolBox (Open-Source Python Library, 2020–Present):** Architected and maintain a library of 100+ functions (500+ commits) for standardized data collection and analysis, including anomaly detection, geospatial clustering, Monte Carlo simulation, and LLM integration; each function documents the reasoning behind the method.

EDUCATION & CERTIFICATIONS

Master of Science, Applied Intelligence | Mercyhurst University | 2015

Professional Certificate, Medical Statistics | Stanford University School of Medicine | 2021

Bachelor of Arts, Political Science & Criminal Justice | Edinboro University of Pennsylvania | 2013

Certifications: Claude Code in Action; Machine Learning Specialization (DeepLearning.AI); AI in Healthcare; Introduction to Python Programming