

Thomas I. Bereknyei

Contact

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- Proven ability to rapidly become an expert in new fields and identify the critical path to implement decisive solutions with significant business and operational impact.
- Engineer and technical planner with 16 years of experience planning operations and designing systems in both business and military settings working with researchers, engineers, operators, and end-users to create efficient and creative solutions.
- Experienced project manager for rapid capability development teams.
- Lead planner for technical and operational exercises involving multiple organizations at distributed locations.

PROFESSIONAL EXPERIENCE

Senior Software Engineer

2019 — Present

Rebellion Defense

Washington, DC

- Full-motion video processing and target recognition; pipeline development, integration, and deployment to support exercises.
- Multi-modal geospatial data processing; developed GDAL/PDAL based ingestion pipeline, orthorectification, data management, and curated into machine-learning-ready datasets.
- Created front-end visualizations, demos, and proofs-of-concept to support sales and guide product vision.
- Supported the training, integration, and deployment of AI/ML systems, primarily Tensorflow-based.
- Familiar with deploying products to hostile computing environments, classified enclaves, difficult approving authorities, and remote locations.

Technical Lead

2016 — 2019

Defense Digital Service

Washington, DC

- Team lead to rapidly develop a tactical counter-UAS system. Oversaw hardware development, electrical design, RF processing, reverse-engineering effort and developed novel timing attack mechanism
- ANET - deployed with a team to Afghanistan to develop, integrate, and hand-off a system to track and understand advisor engagements.
- Developed, flight tested, and performed technology hand-off for an RF system to manipulate integrated air defense systems.
- Supported selection process for a multi-billion dollar cloud acquisition.

Senior Cyberspace Operations Officer

2015 — 2016

Cyber National Mission Force

Fort Meade, MD

- As Senior Cyber Operations Officer (SCOO) directed the execution of over 200 cyberspace missions performed by a dozen National Mission Teams (NMTs).

Exercise Director

2013 — 2015

Marine Forces Cyberspace Command

Fort Meade, MD

- Manage MARFORCYBER exercise participation, scheduling, and long-term development. Transformed ad hoc scheduling into a formal multi-year exercise support plan.
- Lead planner for CYBER FLAG 15 and CYBER GUARD 15 exercises; scenario design, Command and Control construct, network/target design, logistics for 118 participants, and development of training objectives. Provided technical expertise regarding network vulnerabilities and cyberspace threats.

Senior Software Engineer

2014 — 2016 (part time)

OpenTable Inc.

San Francisco, CA (remote)

EDUCATION

University of

California

Berkeley



2005

B.S in Mechanical
Engineering

Minor: Electrical
Engineering and Computer
Science Berkeley, CA

Naval Aviation

Flight Training



2009

Designated as a Naval
Flight Officer Pensacola, FL

CLEARANCE AND CERTIFICATIONS

Certified

Ethical Hacker  2013

CISSP -

Certified

Information

Systems

Security

Professional



2015

Requires renewal

Federal

100

Winner



2018

Top Secret Clearance

latest re-investigation:
2021

- Transitioned standalone servers into a scalable and fault-tolerant cluster architecture utilizing Amazon Web Services (AWS) including; EC2, S3, RDS, IAM, Elastic Beanstalk, EMR, ElastiCache, CloudWatch, and Route 53.

Electronic Warfare Officer

2005 — 2013

Marine Tactical Electronic Warfare Squadron 4

- Flew over 900 hours in the EA-6B Prowler as an Cherry Point, NC Electronic Counter-Measures Officer with 70 combat sorties for 291.1 combat hours with multiple deployments to Operation Enduring Freedom.
- Created a novel electronic attack technique applicable to several target sets and relying on an optimizing algorithm. Confirmed the tactic in coordination with Johns Hopkins University Jammer Technique Optimization Team and employed it in combat operations.

Technical Solutions Specialist

2005

Google Inc.

Mountain View, CA

- Leveraged machine learning algorithms such as self-organizing maps and classifying neural networks to discover novel click-fraud patterns of behavior. Discovered, investigated, and terminated accounts engaged in click duplication and traffic replication.

SKILLS

Project Management

- Founder of Defense Digital Service Jyn Program and technical lead for the successful development of multiple SDR (software defined radio) capabilities which continue to be in use today.
- Operated budget and planned the participation of up to 118 personnel in multiple locations for large exercises.
- Planned logistics to maintain technical support to tactical operations during movements of personnel and equipment.
- Experienced with planning and executing critical infrastructure migrations while minimizing business impact and downtime.

Nix

- Nix contributor since 2013 and managing packages, designing NixOS modules, and reviewing contributions. Currently a committer to Nixpkgs.
- GNU Radio Ecosystem Management with Nix presentation at GRCon18. Based on experience using Nix, NixOS and Hydra to manage a multi-architecture multi-language tactical RF project with hardware-in-the-loop CI/CD testing.
- Built and maintained Hydra infrastructure for geospatial data processing and to support deep learning training.

Programming Tidbits

- Experienced with video codecs and processing with FFmpeg and GStreamer.
- Deployed AI/ML models into production, utilizing GPUs, optimizing for throughput and improving reliability of processing pipelines.
- Utilized low-level geospatial processing libraries (GDAL) to ingest, organize, manage, and serve data for both AI/ML and front-end.
- Embedded Forth development targetting ATmega32U4 and Arduino.
- 2020 Advent of Code solved in Rust in under 1 second. 2018 in AWK.