Christos Mitropoulos

Email : chris.mitropoulos@gmail.com
Mobile : +1-732-895-3357

Summary

Experienced Data Scientist with strong Data Engineering skills that has mainly worked in the invalid traffic and fraud detection space. Interested in full stack roles and solving problems end-to-end, from research to deployment and performance monitoring.

Experience

- **Oracle Advertising - MOAT** — New York, NY
  Senior Data Scientist — *Jun. 2019 – present*
  - Performing exploratory data analysis on ad measurement data for desktop, mobile and connected TV devices
  - Designing, implementing and automating data pipelines
  - Designing, implementing and automating machine learning pipelines
  - Tools: Python, scikit-learn, pandas, spark, pymc, SQL, linux, Airflow, Kubernetes, Argo Workflows, Grafana, Prometheus

- **Perspecta Labs (former Vencore Labs, Applied Communication Sciences)** — Baskin Ridge, NJ
  Cyber Security Research Intern — *Jun. 2018 – Aug. 2018*
  - Developing botnets of the Fast Flux family, on top of the CyberVAN tesbed.
  - Evaluating the performance of the botnets using intrusion detection systems and machine learning based techniques.
  - Tools: C++, Winsock, GoLang, Python, Linux and Windows operating systems.

- **Rutgers, The State University of New Jersey** — New Brunswick, NJ
  Research Assistant - HCI & Security Engineering Lab - Advisor: Prof. Janne Lindqvist — *Sep. 2016 – May 2019*

- **Rutgers, The State University of New Jersey** — New Brunswick, NJ
  Lead Teaching Assistant - Computer Architecture Lab — *Sep. 2016 – May 2019*
  - Teaching Assembly MIPS to approximately 80 students.
  - Preparing and grading lab assignments.

- **Rutgers, The State University of New Jersey** — New Brunswick, NJ
  Research Internship — *Jun. 2014 – Sep. 2014*
  - Research Areas: Pattern Recognition, Machine Learning, Security and Privacy, Human Computer Interaction

- **Digi4sites.com** — Athens, Greece
  Software Engineer — *Jun. 2012– Sep. 2014*
  - Responsibilities: Developing custom websites using HTML, CSS, jQuery, MySQL; Server administration using Amazon Web Services (AWS) tools.

Education

- **Rutgers, The State University of New Jersey, HCI & Security Engineering Lab** — New Brunswick, NJ
  Masters in Electrical and Computer Engineering ; Advisor: Prof Janne Lindqvist; GPA: 3.9 — *Sep. 2016 – May 2019*
  - **Courses**: Massive Data Mining and Learning, Parallel and Distributed Computing, Software Engineering, Regression Analysis, Security Engineering, Operating Systems
  - **Online courses**: Neural Networks and Deep Learning

- **National Technical University of Athens (NTUA)** — Athens, Greece
  Masters of Engineering in Electrical and Computer Engineering; GPA 3.6 — *Sep. 2010 – Sep. 2015*
  - **Thesis**: Created an android based **Gesture Authentication System** using Machine Learning Models, Hidden Markov Models; Grade 10/10
  - **Courses**: Artificial Intelligence, Databases and Information Systems Engineering, Algorithms and Data Structures, Programming Languages, Computer - Communication - Mobile Networks

Programming Skills

- **Languages**: Java, Python, C/C++, MATLAB, Javascript, SQL
- **Frameworks/Libraries**: Scikit Learn, Pandas, Hadoop, SQL, AirFlow, Kubernetes, Argo, pthreads, ISPC, Django,
- **OS**: Linux, Windows

Research Projects

- **Machine Learning and Social Protocols for Enhancing Spectrum Access**
  Advisor: Prof. Janne Lindqvist *Sep. 2016 – Mar 2019*
  - Designed experiments to measure participants' behavior under lossy networks.
  - Designed experiments to get objective video quality assessment of videos streamed under lossy networks.
- **Video Guessing Attacks**
  Advisor: Prof. Janne Lindqvist *Mar. 2018 – Mar 2019*
  - Perform PIN guessing attacks based on video with no view of the victim's screen.
- **Human Behavior Prediction**
  Advisor: Prof. Janne Lindqvist *Sep. 2016 – Mar 2019*
  - Create predictive models of human behavior based on collected data.
  - Built a web-based tool to facilitate data collection.
- **Analyze System Administrators' Vulnerability-handling Behavior**
  Advisor: Prof. Janne Lindqvist *Oct. 2017 – Dec. 2017*
  - Mined data from IPv4 network scanners and disclosed vulnerabilities datasets.
  - Applied exploratory data analysis methods and created models with predictive power.
- **Novel Video Quality metric for Long Videos**
  Advisor: Prof. Janne Lindqvist *Sep. 2017 – Dec. 2017*
  - Developed a novel video quality metric for longer videos, taking into account video freeze events and frame distortions.
- **Social Protocols for Enhancing Network Connectivity Sharing**
  Advisor: Prof. Janne Lindqvist *Sep. 2017 – Dec. 2017*
  - Designed experiments to measure participants network connectivity sharing choice based on nudges.
  - Built a web-based tool to facilitate data collection.

Course Projects

- **Massive Data Minining and Learning**: TheNextHit: Predicting movie success and building Content and Collaborative Filtering recommendation system.
- **Parallel Computing Project**: Wrote CUDA C/C++ code for multi-core CPU architectures and heterogeneous CPU-GPU system applications
- **User Authentication System**: Developed an User authentication system running on Android smart-phones. User-generated gestures are used for identifying the users. Hidden Markov Models were used for modeling the gestures
- **Restaurant Automation System**: Developed an automation system using the Django Python Framework and the MVC design architecture
- **Hotel Management Information System**: Developed a Hotel Management System using Dynamic Web Technologies; PHP, html, css, javascript, MySQL

Honors and Awards

- **2018**: Winner of the Rutgers State University TA/GA Development Fund
- **2017**: Winner of the Gerondelis Foundation Grant

Academic Service

- **SOUPS 2018**: External Reviewer
- **WWW 2018**: External Reviewer
- **SOUPS 2017**: External Reviewer
- **IMWUT 2017**: External Reviewer

Papers

- Xianyi Gao, Yulong Yang, Can Liu, **Christos Mitropoulos**, Oulasvirta Antti, Janne Lindqvist. "Forgetting of Passwords: Ecological Theory and Data",USENIX Security '18