Yifan Tian

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EDUCATION

- **Embry-Riddle Aeronautical University** — Daytona Beach, FL
  Ph.D. in Computer Science; GPA: 4.0 — *Jan 2016 – Dec 2019*

- **Johns Hopkins University** — Baltimore, MD
  M.S. in Security Informatics; GPA: 3.5 — *Aug 2014 – Dec 2015*

- **Tongji University** — Shanghai, China
  B.Eng. in Information Security; GPA: 3.5 — *Sep 2010 – Jun 2014*

RESEARCH PROJECTS

- **Low-Cost NLOS UAV Invasion Detection (Accepted in AIAA/IEEE DASC'19)**: *May 2018 – Oct 2019*
  - **Wireless Network**: Collect and analyze UAV (drone) received signal strength indicators with low-cost Raspberry Pi and achieve competitive invasion detection accuracy against expensive radar & acoustic matrix based solutions
  - **Deep Learning**: Build deep neural networks (DBN & LSTM) using Tensorflow & Keras to detect drone invasion

- **Lightweight Edge Assisted Privacy-preserving CNN (Accepted in SecureComm'19)**: *Sep 2017 – Oct 2019*
  - **Cryptography**: Design a lightweight cryptosystem to support secure CNN data outsourcing to cloud/edge server
  - **CNN**: Apply to well-known models (AlexNet & LeNet) and achieve same accuracy while protecting user privacy

- **Privacy-preserving Truth Discovery with Blockchain (Accepted in DLoT'19)**: *Apr 2018 – Oct 2018*
  - **Blockchain**: Design Ethereum smart contract to achieve high accuracy in decentralized truth discovery tasks
  - **Privacy**: Integrate differential privacy techniques to protect user data privacy with minor accuracy trade off

- **Cloud Assisted Privacy-preserving Image Annotation (Accepted in IEEE CNS'17)**: *Sep 2016 – Apr 2017*
  - **Image Processing**: Use OpenCV and Scipy to implement an image annotation scheme including feature extraction, vector normalization and dimension deduction
  - **Cryptography**: Protect image feature privacy against public cloud by integrating homomorphic encryption

- **Privacy-Preserving K-means Clustering (Accepted in IEEE TCC'17)**: *Sep 2016 – Jan 2017*
  - **Privacy**: Design a clustering algorithm over encrypted data to achieve high accuracy while protecting privacy
  - **Map Reduce**: Introduce secure map reduce to suit cloud environment and enable scalability

- **Social Behavior Based Cross SNS Phishing Attacks (Accepted in IEEE CNS'16)**: *Jan 2016 – May 2016*
  - **Web Crawler**: Use Scrapy and Selenium to implement Python crawlers to collect personal information from public online resources and social network services (SNSs) in ethical style
  - **Social Engineering**: Analyze and propose a SNS linkage cut-off strategy to minimize information leak issue

WORKING EXPERIENCE

- **Agari Data, Inc.** — Foster City, CA
  DevOps Engineer — *Feb 2020 – present*
  Research Intern — *Jun 2018 – Aug 2018, May 2019 – Aug 2019*
  - **Ruby Rails**: Deploy an AWS EC2 Rails App to enable organized scammer baiting, IP tracking & geo-localization
  - **Python Flask**: Design Flask honeypot to trick scammers and collect in-depth scammer intelligence on AWS S3
  - **React.js**: Build a React.js visualizer with Splunk to analyze scammer behaviors and depict scammer connections

- **Embry-Riddle Aeronautical University** — Daytona Beach, FL
  Research Assistant — *Sep 2018 – May 2019, Sep 2019 – Dec 2019*
  - **Cybersecurity**: Conduct cybersecurity research including cloud & IoT security, data privacy, phishing defense etc
  Instructor — *Aug 2017 – May 2018*
  - **Java & Algorithm**: Teach Java programming, data structures and algorithms, provide tutoring hours & grading

PROGRAMMING SKILLS

- **Languages**: Python, Ruby, Java, C\C++, React.js, PHP, SQL, CSS, Matlab, LaTeX
- **Frameworks & Libraries**: Tensorflow, Keras, SciPy, NumPy, Scrapy, Selenium, OpenCV, Flask, AWS SDK, Elasticsearch, Splunk, Rails, Docker, Nginx, Apache, Metasploit, Nessus, Air-crack, Wireshark