Alex Tsankov

CONTACT

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EDUCATION

University of Colorado, Boulder
B.A. Computer Science & Philosophy 2016
GPA: 3.63/4.00
Dean's List - Double Major

Columbia University
MPA Part-Time Executive Masters
Cybersecurity and Finance focus

SKILLS

PROGRAMMING
Python
Java
Go
Javascript
Bash

SYSTEMS
Linux
AWS
GCP
Jenkins (CI/CD)
Terraform / Cloudformation
Kubernetes (EKS & Helm)
Intrusion Detection Systems
Continuous Integration
Docker
Content Delivery Network
IAM (Identity)
Load Balancer (Nginx / Cloudflare)
DNS
Networking
Git
Wireshark
Software Defined Networking
Ansible

WEB DEVELOPMENT
Django
Express.js
MongoDB (NoSQL)
MySQL
REST
React
Next.js

MISC
Sales Engineering
Web3.js
Cryptography
Writing
Cold Storage Techniques

SUMMARY

My most important skill as a developer is *focus*. I'm intrigued by how scalable technology and data solves real human problems, and strive for mastery.
Distributed Systems, Continuous Integration, Cloud, Scaling, DevOps, Security.

EMPLOYMENT

Bloomberg LP — New York, NY · 2020 to Current
Site Reliability Engineer (SRE)
Focus: Deploying and developing CI/CD frameworks in a hybrid cloud (bare-metal/public cloud) financial environment.

- Supporting large bare-metal data centers, **Openstack** VMs, and interconnect between multiple public clouds (AWS, GCP, Azure, etc.) provisioned with **Terraform**.
- Creating tooling on **Python Django** to handle API-driven automation, with custom **React JS** dashboards.
- For automation, developing lightweight **Go-based** deployment agents, and **Ansible playbooks** for hybrid environments.
- Deploying applications and supporting users with **Kubernetes** and **Helm** deployments.
- Developing rich **Jenkins CI/CD pipelines** with strong auditability, reversibility, and security requirements.

Chainalysis — New York, NY · 2019 to 2020
Software Engineer (Data)
Focus: Software and Data. Building anti-money laundering / compliance tools for use by Law Enforcement and Institutions.
Software Engineer tasked with expanding blockchain ingest infrastructure, and transitioning from on-premises to public cloud (**AWS**) deployments.

- Development of **Java modules** to monitor illicit digital currency transactions (Used to analyze $100s of millions of activity).
- Built Jenkins CI pipeline to run 8+ hour weekly **data warehouse ETL** (extract/transform/load) jobs.
- **Kubernetes** and **Docker-izing** of production monolithic Java software.
- Developed rapid **continuous deployment** system for sanctioned entity information (stolen and seized funds).
- Experience working with **PostgreSQL** databases, focused on querying and deployment.

Paxos — New York, NY · 2017 to 2018
DevOps Engineer
Focus: Cloud and Security. Serving the speed and security needs of institutional exchange customers.
Performed DevOps work for a top-40 Bitcoin exchange, serving institutional and high-frequency clients.

- Designed and implemented **Kubernetes-based**, **high-reliability** infrastructure for post-trade settlement of stocks and metals.
- Onboarded clients using **FIX connections** for sub-millisecond **trade execution**.
- Created strategies for high-security private-key storage and exchange security.
- Secured production infrastructure using **SSO** and AWS **IAM** to standardize account management.
- Experience working with **Hashicorp Vault** for secure secret management in multiple deployments.

Workiva — Boulder, CO · 2015 to 2017
Cloud Infrastructure Engineer
Focus: Infrastructure and Cloud. Testing infrastructure that properly scales to meet fluctuating demand.
Built internal tools in Go to achieve a stateless, totally elastic and stateless **Continuous Integration** system.

- Utilized **serverless** execution (**AWS Lambda** and **Codebuild**) for maximum scalability.
- Use of "infrastructure as code" (**Cloudformation**) for proper versioning and reliable deployment.
- Leveraged containerization (**Docker, EKS**) for container building and test running.

Google — Denver, CO · 2015 to 2016
DevOps Internship
Focus: DevOps. Leveraging machine learning to automate repetitive logistical communication.
Supported the Google Global Cache **content delivery network** (CDN).

- Automated remote hardware replacement utilizing Google **proprietary workflow engine**.
- Designed and built a **machine learning service** to automate communication with international ISP partners.
- Worked in a data-center test setting on **network profiling** and **physical server installation**.

CU Boulder's "Next Generation Networks" Lab Group — Boulder, CO · 2014 to 2016
Researcher (part-time)
Focus: Research. Reliably testing script deployments to an Intrusion detection system.
Supported Prof. Eric Keller and his "Next Generation Networks" lab in the development of:

- A **software defined network** (SDN) controller module, to integrate with the Bro **intrusion detection system** (IDS).
- A Continuous Integration framework for Bro IDS. I presented at an ACM workshop demonstrating its potential as a virtualized network function.

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PROJECTS

Co-Founder of Commonwealth.gg   2018 to 2019

Built a startup. Successfully launched a smart contract based savings fund to provide unemployment insurance for members of the gig economy and live streaming community, with a focus on **peer-to-peer** savings.

- Our **security-audited smart contract** held over $100,000 at its peak, with 100s of global participants, and paid out over $15,000 in dividends to distinct users.
- Largest smart contract by balance on the Ethereum Classic (ETC) blockchain.

Co-Founder of CUFCQ.com   2015

Designed and built a popular open-source Ruby on Rails site (2,000+ users/month) that summarizes and visualizes CU Boulder professor evaluation statistics. This project involved:

- Scraping and cleaning large amounts of **Excel data** (XSLX) to make it accessible for visualization.
- Managed deployment of a Rails app with complex database migrations.

Hackathons

- EthNY 2019 - Built and deployed a SHA3 Proof of Work testnet for Ethereum. Live-streamed the 36 hour event along with interviews.
- Money 20/20 - Proof of concept phishing incentivization system that tied responses directly to monetary transactions.
- Coinorado - SMS-based Bitcoin transfer system for interaction with Bitcoin from low-end "dumb" phones.
- PennApps XIII - Built a web app that utilized machine learning to predict blood sugar spikes in diabetic patients.

RECOGNITION

Medium Articles - 40,000 views   2020

Technical and instructional articles achieve more than 40,000+ views, with 13,000+ complete reads, 36% fully-read.

Art Installation featured on Vice News   2018

Programmed "HODLism: Initial Soul Offering" an art project that was featured on Vice News.

Published on HackerNoon   2017

10.5K+ views on "Dealing with a nasty AWS Billing Surprise: Beware the defaults."

Invited to Present at NFV World Congress (San Jose) - Association for Computing Machinery   2016

Matthew Monaco; Alex Tsankov; Eric Keller. *Taking the Surprise out of Changes to a Bro Setup.* 6th ACM Conference on Data and Applications Security and Privacy (CODASPY-2016). New Orleans, LA.

DePauw Undergraduate Ethics Symposium - Prindle Institute of Ethics, DePauw University   2015

Invited to discuss and present *The Ethical Automaton*, a paper about the ethical issues surrounding autonomous vehicles.

Cisco Certified Network Associate (CCNA)   2010

Expired

Media Engagements

Federal Bar Association National Convention (New York, NY), League of Blocks (Taipei, Taiwan), NFV World Congress (San Jose, CA), Ethereum Classic World Summit (Vancouver, Canada), Blockchain Developers Meetup (Sofia, Bulgaria), Roll Call (Washington DC)

INTERESTS

Urban Agriculture -- Particular focus on pickling different locally-grown vegetables.

History -- Enjoy learning about and traveling to historically relevant places around the world.

Live Music -- Exploring instrumental concerts ranging from Contemporary Jazz, to Funk, to Classical.