Nick Ficano

FMR SOFTWARE ENGINEER AT TWITTER • TOP-10 PYTHON DEVELOPERS (BY GITHUB STARS) IN NYC [1]

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A software engineer with experience working in large tech companies and early-stage startups, building and leading collaborative teams of developers, and finding creative solutions for complex business problems. I'm passionate about service architecture, developer efficiency, and KPI-related workflow optimization. Trusted as first engineer/employee hire at two companies.

PROFESSIONAL EXPERIENCE

Sr. Software Engineer   Aug. 2020 - Nov. 2022
Twitter | *Fully Remote*
Responsible for incident response tooling, designing and implementing threat and vulnerability notification system, and security event processing pipeline.

Key Achievements:

- Worked closely with our *Detection and Response Team* (DART), developing custom incident response system after failures in cross team communication and coordination during a high-profile security breach in 2020[2].
- Developed a security alert and escalation policy platform, mapping incident events to policies that detail teams to notify, creating JIRA tickets, perform automatic follow-ups, and the escalation procedure to guarantee remediation within the service-level agreement.
- Developed proof-of-concept security event processing pipeline (or SEPP). SEPP uses ***Apache Beam*** and ingests real-time server and workstation events, applies windows and transforms, and then analyzes for unpatched vulnerabilities, malware, and unusual or suspicious user activity.

Staff Engineer (1st overall hire; integral part of growing an engineering team to 25 developers)   Jan. 2016 - Feb. 2020
Simple Health | *Greater New York City Area*
Responsible for designing and implementing all early system and ePHI-compliant cloud infrastructure, including project scaffolding, data modeling, CI/CD pipeline, defining standard patterns and conventions, campaigned for and led the move to **agile** and oversaw the post-order placement processing team.

Key Achievements:

- Product owner for all post-order placement operations, including "*agent tools*," an in-house, ***zero-trust*** customer service system to fulfill orders and securely communicate with patients and staff physicians.
- Worked closely with staff physicians, senior leadership, customer support, and product teams to help identify bottlenecks, find optimization opportunities, and drive KPIs.
- Developed MVP for a ***patented***[3] ***vision engine*** capable of performing real-time pupillary distance tracking from a mobile phone, paving the way for patients to take virtual eye exams and physicians to review them remotely.
- Developed image processing pipeline to analyze scanned images of patient prescriptions, applying transforms and correcting for perspective and orientation.
- Developed a chatbot to allow employees to request leased ingress access to resources behind the firewall and the ability to spin up on-demand production snapshots in a temporal database instance for development and debugging.

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1 Source: git-stars.com (Rank prior to spinning off pytube into an independent organization)
2 2020 Twitter account hijacking - Wikipedia
3 US Patent No. 10799112B2

Sr. Software Engineer   May. 2012 - Jan. 2016
Keep Shopping | *Greater New York City Area*

Responsible for creating a universal shopping cart order fulfillment system and product discovery graph.

   Key Achievements:

- Developed a product discovery graph using ***Redis*** to define edges between products based on price, manufacturer, and more. Graph edges became strengthened or weakened depending on subsequent user engagement.
- Designed and maintained an order fulfillment system, collaborating closely with the product team working to simplify customer service workflows, identify and prevent fraud, and create, manage, and reconcile proxy credit cards.

Software Engineer (1st overall hire)   Dec. 2010 - May 2012
OneReceipt (acquired by Rakuten) | *Greater New York City Area*

Responsible for designing and implementing all early system and cloud infrastructure, including project scaffolding, data modeling, etc., and creating a distributed email ingestion pipeline.

   Key Achievements:

- Developed a naive Bayes classifier to analyze emails for specific characteristics and calculate the probability that an email is related to an online purchase.
- Developed a distributed email ingestion pipeline to mine an email inbox, identify order-related emails, and extract order details.

Owner & Developer   June 2010 - Present
JotOnce | *Greater New York City Area*

Developed a web application for creating anonymous, shareable, password-protected notes that self-terminate in minutes or days. Since 2010, Today, JotOnce continues to generate passive revenue each month.

OPEN SOURCE

pytube: Lightweight, Pythonic, dependency-free, library for downloading YouTube Videos. (*8,000+ stars*)
python-lambda: Toolset for developing and deploying serverless Python code in AWS Lambda. (*1,400+ stars*)
python-humps: Convert between snake case, camel case and pascal case. (***1.1M monthly downloads***)

KEY SKILLS

Python • NodeJS • Apache Beam • Kafka • Bazel • Terraform • Cloud Infrastructure • System Design & Architecture Networking Internals • Serverless Compute • Containerized Architecture

EDUCATION & TRAINING

- Computer Science, Southern Connecticut State University
- CCNA (Cisco Certified Network Associate)