*Konstantino*Sparakis

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EDUCATION

M.S. Computer Engineering 3.4 GPA   Boston University | **2017**
Course Work: Embedded Systems, Applied Symmetric Cryptography, Intro to Cryptography, Cyber Security, Network Security, Networking for IOT, Cloud Computing, Data Science with Python.

B.S. Computer Engineering & Minor in Business Administration   Boston University | **2016**

WORK EXPERIENCE

Backend Software Engineer   **August 2019 – April 2020**
Elixxir | Claremont, CA (Working Remotely)   *Golang, Distributed Systems, Cryptography, Blockchain*

- Worked in a team of 8, to build a distributed network that sends messages and payments anonymously and encrypted at speeds greater than 100k transactions per seconds.
- Assisted in preparing Golang codebase upgrade from Alpha to Beta-Net and open sourcing, by improving performance, fixing race conditions, refactoring and adding test coverage.
- Critically reviewed & discussed architectural & cryptographic decisions with team, leading to features such as node team error management, unified polling, authenticated communication between nodes.
- Critically reviewed things such as tokenomics and governance of the elixxir distributed network.

Software Engineer & UX Designer   **December 2019 – August 2019**
Elixxir | Claremont, CA (Working Remotely).   *Product Management, UI/UX design, Kotlin, Android, Python, AWS Serverless*

- Worked with management & backend team to design product concepts, for the xxMessenger & xxCollective mobile applications.
- Lead UX research to design app features that maintained usability while preserving privacy.
- Designed initial versions of both mobile applications UI/UX using Sketch and Balsamiq
- Architected & implemented the xxMessenger and xxCollective Android apps, using Kotlin, Dagger, Room, MVVM, RxJava, and Golang bindings to handle communication with distributed servers.
- Architected & Implemented, a serverless REST API Backend supporting over 10k users, built on AWS python Lambdas, API Gateway, MySQL RDS, VPC, for the xxCollective.
- Implemented a privacy focused AWS Cognito instance, allowing users to anonymously authenticate with the xxCollective backend.

Junior Full Stack Software Engineer   **July 2018 – February 2019**
PrivCo | New York, NY   *PHP Zend, Python, AWS Serverless*

- Integrated Salesforce with the PrivCo platform allowing customers to directly push data into salesforce. Built frontend UI experience along with Python Serverless RESTFUL API using AWS Lambda, API Gateway, and Cognito.
- Migrated existing MD5 hashed passwords to bcrypt.
- Worked with ZEND PHP backend to create routes and edit frontend user interface using jQuery.
- Performed security analysis on application, to prevent SQL injection, XSS, and CSRF.
- Implemented new company wide IT policies to increase security and education

Owner   **September 2016 - Present**
Cipher Zero Inc. | Queens, NY

- Performed security audits on client's Android apps ensuring secure cryptographic implementations.
- Worked with client on creating custom Android-based device for securely storing cryptocurrencies.
- Built web platforms for clients using React frontend and AWS Lambda/API Gateway Python backend, for easily scalable "server-less" solutions for improving small businesses operations.

Software & Security Engineering Intern   **March 2016 – October 2016**
Lexumo | Cambridge, MA   *Phabricator, JIRA, Slack, Git, Python, Docker, Strace*

- Maintained and improved client application code written in python and c.
- Ensured compatibility of applications client-side code with the majority of Unix based systems. using Docker with a CentOS5 image to ensure compilation with lowest Glib library possible.

Software Engineering Intern   **May 2015 – January 2016**
Carbonite | Boston, MA   *JIRA, Jenkins, Github, Node.js, Ruby, C#, PowerShell & AWS (EC2, VPC, S3, RDS)*

- Worked on Cloud Infrastructure and Quality Assurance teams.
- Researched methods for recovering Windows onto a physical machine from a cloud instance.
- Researched limitations of Amazon Web Services in order to build a quick backup to ec2 instance.
- Communicated with AWS support team for new solutions.
- Worked with Jenkins to create automated tests in AWS.
- Assisted in design and implementation of a RESTFUL API for use by a new Android application, which backs up mobile data to all free clouds (Dropbox, OneDrive, google drive…).
- Mentored new Co-Ops and worked with remote employees in Ukraine.

SKILLS

Fluent Languages - English, Greek, and Spanish

Programming Languages/Frameworks - Python, JavaScript, Golang, Kotlin, Java, React.js, jQuery, Node.js, HTML, CSS, C, C++, C#.

Design - Sketch, Balsamic, Wireframing, Prototyping, Abstract, Illustrator, Zeplin

PROJECTS

Black Widow: Web Browser Crypto Vulnerability Scanning   March 2017 – May 2017

Applied Cryptography   *MongoDB, AWS Lambda, REST API, Crypto, Google Chrome, JavaScript*

- Designed and Implemented a Google Chrome extension that scans and highlights cryptographic vulnerabilities found on coding tutorial websites (Think Stack Overflow).
- "Server-less" Python API Backend, built using AWS lambda and API Gateway.
- Successfully Identified improper Java and Python Cryptography implementations, and built system modularly for scalability, adding new vulnerability scans easily.
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Sundial: Solar Monitoring Platform Android App   September 2015 – May 2016

Senior Design   *Scrum, Android, Java, Python, Django, REST, PostgreSQL*

- Lead Implementation of the Android App.
- Sundial is a Hardware-to-Cloud solution for monitoring power usage of solar units in rural Africa.
- Deployed for Oolu Solar in Senegal, Africa, a startup that manages 200+ rural villages.
- Assisted in hardware design and embedded programming of networking chip.
- Designed wireframes and communicated with customers to create a product that fit their needs more than what they had simply requested.
- Assisted architecting PostgreSQL data model and Restful API routes.

Apekit: Android Vulnerability Scanning   September 2015 – December 2015

Cyber Security   *Androgaurd, SQL, Android, Python & Linux*

- Python pipeline that reverse engineer's Android APK's to source code, and statically analyzes for vulnerabilities.
- Analyzed over 1000 Android applications
- Discovered API keys including Amazon Web Service keys along with other vulnerabilities.