Zachary Zaiman

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EDUCATION

Emory University, Atlanta, GA, Emory College of Arts and Sciences   May 2023
Bachelor of Science in Computer Science with Highest Honors   *Cumulative GPA:* 3.87/4.0

Technical Skills: Rust, C#, Python, Golang, C, SQL, KQL
Frameworks: Kubernetes, Docker, Apache Maven, Git, Azure Data Explorer, MySQL, MongoDB, Azure DevOps, Tensorflow

WORK EXPERIENCE

Software Engineer, Microsoft, Redmond, WA   July 2023 – Present
- Owned the design, development, and deployment of an IP reputation service dynamically scoring all IP's interacting with Azure in real time
- Designed and implemented a distributed telemetry service to monitor bandiwidth consumption by different Azure load balancing scenarios
- Integrated DDOS protection services directly into Azure's core networking stack in order to detect and mitigate attacks at a faster and more reliable rate, improving the delay from attack detection to mitigation in many cases to under a second
- Worked directly with customers both internal and external to Microsoft to mitigate ongoing DDOS attacks and restore full service availability

Tech Lead, KeyStrike LLC, Atlanta, GA   Feb 2023 – July 2023
- Owned the end to end design of the frontend and backend of the administration dashboard, allowing customers to interact and monitor the potentially malicious keystrokes on their organization's machines in real time
- Particiapted in the scaling of the underlying technology from a proof of concept to a scalable minimum viable product
- Delivered minimum viable product to three pilot customers and integrated their feedback into further iterations of the product

Software Engineer Intern, Microsoft, Atlanta, GA   May 2022 – Aug. 2022
- Enhanced the state of the art in streaming telemetry across Azure's backbone WAN
- Produced production ready code deployed on hundreds on network devices across the WAN
- Achieved skills proficiency in many internal Microsoft services and tools that power Azure

Research Assistant, Healthcare Innovations and Translational Informatics Lab at Emory, Atlanta, GA   Aug. 2020 – July 2023
- Spearheaded project with an international team of researchers from eight institutions to explore fairness in medical AI through federated learning
- Supervised a cohort of six other undergraduate students working in the lab and provided guidance on their projects
- Created an internal imaging and tabular medical data anonymization tool, and managed the extraction and data processing pipeline for other stake holders in the Emory Hospital system

Cognitive Developer Intern, IBM Watson Health, Raleigh, NC   May 2021 – Aug. 2021
- Implemented a data processing pipeline through Cloud Object Storage (COS), Apache Spark, and Apache Cassandra to facilitate faster business logic queries on Fast Healthcare Interoperable Resources (FHIR) data
- Benchmarked the new architecture against IBMs existing architecture by persisting over 150 million data instances and running unit tests;
- Adapted an existing API to dynamically serialize FHIR resources of different types and handle exceptions

PUBLICATIONS

- Towards an internet-scale overlay network for latency-aware decentralized workflows at the edge (https://doi.org/10.1016/j.comnet.2021.108654)
- Performance of a Chest Radiograph AI Diagnostic Tool for COVID-19: A Prospective Observational Study (https://doi.org/10.1148/ryai.210217)
- AI recognition of patient race in medical imaging: a modelling study (https://doi.org/10.1016/S2589-7500(22)00063-2)
- Evaluation of federated learning variations for COVID-19 diagnosis using chest radiographs from 42 US and European hospitals (https://doi.org/10.1093/jamia/ocac188)
- Opportunistic detection of type 2 diabetes using deep learning from frontal chest radiographs (https://www.nature.com/articles/s41467-023-39631-x)
- Enabling chronic obstructive pulmonary disease diagnosis through chest X-rays: A multi-site and multi-modality study (https://www.sciencedirect.com/science/article/abs/pii/S1386505623002290)
- Ability of artificial intelligence to identify self-reported race in chest x-ray using pixel intensity counts (https://doi.org/10.1117/1.JMI.10.6.061106)
- Networking Research Innovations for Telesurgery: A Systematic Review (https://ieeexplore.ieee.org/abstract/document/10062924)
- The Telehealth Dilemma—Health-Care Deserts Meet the Internet's Remote Regions (https://ieeexplore.ieee.org/abstract/document/10224559)

Social Media

LinkedIn: https://www.linkedin.com/in/zach-zaiman/
Github: https://github.com/zmz223

ADDITIONAL SKILLS AND INTERESTS

Language Skills: Hebrew (Fluent); Spanish (Conversational)
Fine Arts and Special Interests: Playing Guitar**,** International Travel, Running, Fitness & Nutrition