SAMER NAJJAR

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References available upon request.

SKILLS

Languages
Python, Java, JavaScript, C++, PHP, Go

DevOps
Kubernetes, Terraform, Docker, CI/CD

Other
AI/ML, Data Science, IAM, Web Dev, APIs

EXPERIENCE

Indeed, Inc., Austin, Texas — Sep 2022 - May 2024
Associate Security Software Engineer

- Worked on fraud threat detection and identity & access management (IAM), with on-call responsibilities.
- Migrated all IAM roles to open-source OIDC provider, part of initiative to save $265,000 annually in licensing fees [Indeed Blog: https://engineering.indeedblog.com/blog/2024/07/workload-identity-with-spire-oidc-for-k8s-istio/].
- Enhanced monitoring and alerting for our core infrastructure OAuth platform.
- Identified and fixed 3-year-old bug, restoring and vastly improving malicious IP detection on the company network.
- Enhanced our IP-scanning service by designing and implementing the integration of third-party threat intel, expanding coverage from 0.00035% to 99.98% of IPv4 space, and increasing threat detection by 483%.
- Took initiative to streamline and partially automate our deployment process, saving several hours weekly for team.
- Took initiative to independently develop a library of tools for the team to automate performance metric reporting, saving several hours of manual data-collection and analysis monthly.
- Identified a high-impact bug in the widely-used JupiterOne cyber asset analysis platform, and initiated a patch.
- Organized and managed a knowledge-sharing forum between business-critical security teams.
- Technologies used: Java, Go, Python, Kubernetes, gRPC, Argo CD, Terraform, Docker, AWS

Komak Solutions, Missouri City, Texas — Apr - Sep 2019
Full-Stack Web Developer (contractor)

- Developed an online electricity supplier marketplace using TypeScript, MongoDB, AWS, ReactJS.
- Developed backend for processing orders, credit checks, and product filtering; designed frontend product cards.
- Noted by manager for consistently delivering sprint goals and having keen ability to quickly master new concepts.

EDUCATION

The University of Texas at Austin, Austin, Texas
Master of Science in Artificial Intelligence — In progress

- GPA: 3.75
- Relevant coursework: ML, deep learning, Bayesian inference, MLE, neural networks, computer vision, NLP/LLMs

Bachelor of Science and Arts in Mathematics, Certificate in Elements of Computing — May 2022

- 4.0 department GPA, 3.95 overall GPA
- Graduated with Highest Honors (top 4% of class)
- Relevant coursework: software engineering, machine learning, data analytics, web programming, linear algebra, discrete math, probability, multivariate calculus, cryptography, number theory, numerical analysis

Certificates:

- Supervised Machine Learning by Stanford Online
- Data Science Boot Camp by General Assembly

PROJECTS

Heart Arrhythmias ML Research: In an independent research project, I trained machine learning models on ECG data from 10,000+ patients to diagnose heart conditions, achieving 94% accuracy and a recall score of 0.93. Built in Python (sklearn, numpy, pandas, matplotlib). Used feature engineering and classifiers like KNN, decision trees, and logistic regression.

Oud Rib Template Generator: Invented a mathematical model for oud/lute bowl profiles and devised a method to rapidly generate rib templates for oud/lute bowls of semi-circular cross-section. Leveraged calculus and engineered numerical techniques to optimize the method, significantly improving efficiency compared to traditional construction methods. Implemented a Python tool that allows users to customize the bowl shape, then generates the rib template in real-time.

SuperTuxKart AI: With a team, trained a competitive AI for SuperTuxKart Ice-Hockey using DAgger imitation learning with PyTorch, with plans for strategic enhancements through reinforcement learning. I led the writing of a publication-worthy technical paper on our findings, highlighting the impact of machine learning in gaming.

“Squeezer” Website: With 3 other devs, built a web app that predicts stock short-squeezes from technical indicators. Used web scraping and APIs. Predictions updated semi-hourly by a cron job. Used SQL, PHP, Python, and AJAX.