Joel Katticaran

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 katticaran | in jkatticaran

EXPERIENCE

MICROSOFT
SOFTWARE ENGINEER
May 2022 – May 2025 | Redmond, WA

- Owner and lead developer for location features in the LivePersonaCard across Microsoft Teams and Outlook. [~100M MAU]
- Authored the design and architecture specifications for Location features on Teams, while also leading privacy and compliance reviews.
- Developed Microsoft Copilot services that enable the AI agent to take advantage of location services and automatically schedule in-person meetings.
- Founder of Microsoft Places - A Microsoft product designed to optimize hybrid workflows and enhance organizational collaboration.
- Developed Microsoft Neighborhoods, an internal chatroom platform for Microsoft employees to foster collaboration and community.
- Modernized the Outlook Platform by transitioning it to a microservice architecture, improving scalability and development agility.

ARISTA NETWORKS
SOFTWARE ENGINEER
Aug 2019 – April 2022 | Nashua, NH

- Developed network monitoring tools used in all Arista Switches.
- Enhanced the Arista implementation of routing protocols like BGP and MPLS in accordance with specifications provided by IETF.
- Active member of the team of engineers involved in recruiting engineering talent.

GRINNELL COLLEGE
RESEARCHER | COMPUTER SECURITY
Jun 2017 – Aug 2017 | Grinnell, IA

- Developed a C/C++ library that seals Return Oriented Programming (ROP) vulnerabilities in a program.
- Achieved a 82% decrease in ROP vulnerabilities with only a 10% increase in average runtime.

GRINNELL COLLEGE
RESEARCH ASSISTANT | ENERGY PROFILING
May 2016 – Nov 2016 | Grinnell, IA

- Researched methods on energy profiling programs at a functional level.
- Calculated the rate of energy consumption with an accuracy of 95% using a linear regression model.

EDUCATION

DARTMOUTH COLLEGE | HANOVER, NH
BACHELOR OF ENGINEERING (COMPUTER ENGINEERING)
Graduated Jun 2019

GRINNELL COLLEGE | GRINNELL, IA
BACHELOR OF ARTS (COMPUTER SCIENCE)
Graduated May 2018

INDEPENDENT PROJECTS

AUTOCOMPLETE
Implemented an autocomplete in C using a Ternary Search Tree. This slightly unconventional data structure is a space-efficient solution that can handle much more data.

COMPRESSOR
Implemented a lossless data compressor in Java using the Huffman encoding.

PHOTO BACKUP
Script that automatically backs up and syncs my GoPro photos and videos across multiple external hard drives.

SEARCH ENGINE
Developed using C/C++ in order to efficiently index words on websites and quickly answers queries.

TEACHING

LEARNING FELLOW
Co-designed and taught the curriculum for the CS50 Software Design class at Dartmouth College.

TEACHING ASSISTANT
Discrete and Probabilistic Systems •General Physics

SELECT COURSEWORK

SOFTWARE
Machine Learning •Artificial Intelligence •Computer Security •Advanced Algorithms •Operating Systems •Discrete Math in CS

HARDWARE
Advanced Digital System Design •Microprocessors •Computer Architecture •Digital Electronics

SKILLS

PROGRAMMING LANGUAGES
Python •C# •C++ •Go •Racket •Bash

LANGUAGES
English • Malayalam • Hindi

INTERESTS

Pottery • Backpacking • Artificial Intelligence • Music