Hemanth Rao Karade Nagendra

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Education

- **University of Colorado** — Boulder, USA
  Master of Science, Computer Science; GPA: 4.0/4.0 — *Aug 2022 - May 2024*
- **R.V College of Engineering** — Bangalore, IND
  Bachelor of Computer Science and Engineering; GPA: 8.49/10 — *Aug 2014 - May 2018*

Skills Summary

- **Programming Languages**: Python, JavaScript, Perl, C, C++, Java, Golang, PHP, Bash, HTML5, CSS3
- **Framework**: React.js, Node.js, Flask, Spring, Perl Moose
- **Software & Tools**: Docker, Kubernetes, Jenkins, Salesforce CRM, AWS, GCP, Grafana, Ansible, GIT, Firewalls, Tenable, Infoblox NIOS & Netmri
- **Database Systems**: MySQL, PostgreSQL, MongoDB

Work Experience

- **Arista Networks**
  Software Engineer Intern — *May 2023 - Aug 2023*
  - **OpenBMC**: Worked on enhancements on the linux distribution for management controllers used in devices such as servers and top of rack switches, also streamlined the software deployment and delivery process
  - Contributed to enhancing CI & CD processes to seamlessly integrate openBmc into Arista's development workflow
- **Akamai Technologies**
  Senior Software Engineer — *Oct 2021 - Aug 2022*
  - **The Bulwark - Network Security Project**: Spearheaded the end-to-end development of an extremely scalable full-stack application for Akamai's corporate network, **single-handedly designing and developing it**. The application streamlines firewall policy implementation across 150+ locations, managing request flow, automating approvals, implementing firewall policies, and providing visual dashboards in a **distributed environment**. This effort results in saving **≈15,000+ hours of manual work annually** for the network operations team
  - **Salesforce sandbox post-refresh framework**: Designed and developed a framework in python to automate sandbox post-refresh activities for **≈600 sandboxes annually** and reduced sandbox refresh time **from 3-4 days to under 6 hours**

  Software Engineer II — *Oct 2019 - Sep 2021*
  - **Falcon**: Architected and developed a **scalable full-stack application** and deployed in a distributed environment. This centralized user interface benefits cross-organizational QA teams, streamlining web-based automation, API, and database testing without the need for manual script writing. This optimization results in **annual time savings of ≈5,000 hours**
  - **Patching tool**: Designed and implemented a robust solution for **identifying, managing, and patching vulnerabilities** across a network of 10,000+ virtual machines. The system's scalable architecture seamlessly accommodates various device types, contributing to **annual savings of ≈5,000 hours in manual patching** for the IT Operations team

  Software Engineer I — *Jul 2018 - Sep 2019*
  - **Citadel**: Engineered a Perl-based framework for Salesforce metadata deployment, optimizing the process by fetching metadata from lower environments and expediting deployment to higher stages. Significantly **reduced deployment time from 3 days to under 15 minutes**, enhancing overall efficiency
  - **VM Build Automation**: Automated UNIX virtual machine build and provisioning workflow, seamlessly integrating with Salesforce, Infoblox NIOS, and VMware Vsphere. Achieved an **annual time savings of ≈300 hours**
  - Developed scripts and ansible playbooks to **automate manual tasks** performed by system, network, and IT operations team.

  Software Engineer Intern — *Jan 2018 - Apr 2018*
  - **HostDB Tool**: Designed and developed a LAMP Stack application to efficiently retrieve details of ≈10,000 servers, process data, and present results in the desired format. **Realized annual time savings of ≈500 man-hours**
- **Hindustan Aeronautics Limited**
  Software Engineer Intern - Mission Combat System R&D Centre — *May 2016 - Aug 2016*
  - Developed a cross-platform application for secure wireless communication between two remote airborne computers. The primary focus is on studying and implementing how cryptographic algorithms can be effectively used in warfare scenarios

Publications

- K. H. Rao, N. Chandrakanth and A. K. Koundinya, "Secure Handshake Mechanism for Autonomous Flying Agents Using Robust Cryptosystem," 2017 2nd International Conference on Computational Systems & Information Technology for Sustainable Solution (CSITSS), Bangalore, 2017, pp. 1-5 (Available on IEEE Explore and Arxiv Sanity)

Honors and Awards

- Akamai Akalades Award, cash grant and was among the **finalists of Most Valuable Player Award 2021** for project Bulwark
- Recipient of multiple Akamai Akalades Awards, Akamai spot awards, and cash grants during my tenure at Akamai