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, Golang, JavaScript, Typescript, Java, Perl, C, C++, PHP, Bash, HTML5, CSS3
- **Frameworks**: React.js, Node.js, Express.js, Flask, Django, Spring, RabbitMQ, Apache Kafka, Pandas, Numpy, Perl Moose
- **Software & Tools**: Docker, Kubernetes, Helm, Terraform, Jenkins, Salesforce CRM, AWS, GCP, Azure, Linode, Sequelize, Sqlalchemy, GIT, Perforce, Grafana, Ansible, Firewalls, Tenable, Infoblox NIOS & Netmri
- **Databases**: MySQL, PostgreSQL, MongoDB, Redis

WORK EXPERIENCE

- **Akamai Technologies**
  Senior Software Engineer   *May 2024 - Present*

  - **Enterprise Application Access**: Working on development of Zero Trust Network Access solution offering precise access to private applications, based on identity and context for Enterprises. Focused on enhancing security features, increasing scalability, improving stability, and creating a flexible framework for future feature development
  - Working on integrating policy engine as an authorization service to other Akamai security products

- **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

- **Appy Monkey Studio**
  Software Developer Intern - Game Programmer *Jun 2015 - Jul 2015*

  - Contributed to improving existing games and developing features for a new game - Blox 3D Junior. The improvements involved redesigning the user interface to enhance the gaming experience

Teaching

- **University of Colorado** Boulder, USA
  Graduate Teaching Assistant - 2270: Data Structures *Aug 2023 - May 2024*

  - Conducted Data Structures weekly recitations and guided students in enhancing their problem-solving skills using C++
  - I work with Professor, other TAs, Course Managers, Course Assistants, and graders on other coursework-related responsibilities to ensure the course's learning objectives are met

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 and was among the finalists of Most Valuable Player Award 2021 for project Bulwark
- Akamai Akalades Award, cash grant of $200 for delivering the Falcon project
- Akamai Spot award, cash grant of $150 for outstanding contribution on project Citadel
- Cash grant of $200 every year for academic excellence from the Ministry of Human Resource Development (MHRD) for **4 years**
- Winner at Akamai Hackathon 2021 for prototyping NLP-Based search engine that suggest closed ticket to users when they create a new one
- Cash grant of $200 from Ernst and Young (E&Y) for exceptional all round performance in academics & sports for a period of 6 years (2012-18)
- Cash grant of $200 every year from Ministry of Human Resource Development (MHRD) for a period of 4 yrs (2014 - 2018)
- Cash grant from Govt. of Karnataka, India of $500, for good academic performance over a period of 4yrs from 2014 - 18
- Best Minor Project for project titled "Efficient Autonomous Traffic Control Systems Using Decision Trees"
- Best Self Study for project titled "Video Super-Resolution"
- RVCE Badminton Sports Team: Winner at VTU South Zone and Inter Zone Badminton tournament in 2017 & 2018
- Winner at 30th Sub Junior Nation Level Badminton championship conducted by Badminton Federation of India at Dholpur, Rajasthan in 2011
- Won medals in multiple Intra and Inter college festival events