M S Nishanth

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SKILLS

PROGRAMMING

Over 3000 lines:
Python • C • C++ • Shell
Familiar:
Golang • Rust • AS3 • LaTeX•
PHP • CSS • HTML

TOOLS:

Git, Wireshark, Vim, GDB, Postman, Perforce, RBT, Pytorch, Numpy, Pandas, Matplotlib, Jira, Confluence, LATEX.

SOCIALS

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LinkedIn:// **msnishanth**

OPEN SOURCE

OWASP ML TOP10 | ⦿
ODOH Client | ⦿

EDUCATION

IIT HYDERABAD

M.Tech in CS 2018-20

UCET, ANNA UNIVERSITY

B.E in CS 2013-17

COURSEWORK

GRADUATE

Distributed Computing
Convex Optimization
Video Content Analysis
Applied Machine Learning
Probabilistic Models for ML
Advanced Data Structure and Algorithms

UNDERGRADUATE

Information Retrieval
Operating Systems
Artificial Intelligence
Design and Analysis of Algorithms
Cryptography and Network Security

EXTRA-CURRICULARS

F5 Day'21 Organizing Committee.
CADLAM'18 Conference Core Team.
Secretary - CSE, UCET 2017.

INTERESTS

If I'm not coding I'm usually reading books, staring at my fish tank, losing RR in valo.

EXPERIENCE

F5 | SOFTWARE ENGINEER 2

Sep 2023 - Present | HYD, IN

- Improved **Traffic Classification by 3%** over CEC Engine, by proprietary Deep Learning Model deployed on CPU.
- **Reduced 96% human effort** for IPS & TC IM Package release by automation of tasks such as addition, verification and publication through CI/CD pipelines.

F5 | SOFTWARE ENGINEER 1

Sep 2020 - Sep 2023 | HYD, IN

- Designed & Implemented **ODoH, HPKE & SVCB** capability on cBIP DNS solution. Compliant with RFC 9320, 9180, 9460. ODoH uses HPKE for constructing odohConfig and its discovery by SVCB DNS resolution.
- **Boosted DNS Monitor Probing by 20%** by introducing batch processing queue by utilizing modified knuth shuffle.
- Unbound Enhancements for DNS Cache **Boosted SP's RPS by 10%** on F5 DNS Solutions, by implementing PREFETCH, SERVE_EXPIRED and MIN_RTT.
- **Improved RPS by 35%** for indeterminate and insecure domain names on Validating DNS Resolver by using fast cache Lookup.
- **Achieved 88% increased precision** in GeoIP by seamlessly transitioning to GeoIP dbv3, while maintaining lookup time.

IIT HYDERABAD | TEACHING ASSITANT

July 2018 - Aug 2020 | HYD, IN

- **Evaluated** students in multiple courses, ADSA, FML, PMML at IIT Hyderabad.
- **Maintained high-performance GPU cluster** with 128GB RAM and 1TB GPU capacity, ensuring optimal performance and uptime for compute-intensive workloads.

RESEARCH

STRUCTURED OPTIMAL TRANSPORT | RESEARCHER · ⦿

Aug 2019 – July 2020 | IIT Hyderabad, India
Worked with **Prof. Saketha Nath** on **Optimal Transport** to encapsulate the substructure of space by introducing the submodularity, which is a nonlinear function, using a Block Diagonal Representation of the samples.

HIERARCHICAL MUTUAL EXCLUSION | RESEARCHER · ⦿

Aug 2018 – Nov 2018 | IIT Hyderabad, India
Worked with **Akash Banerjee** on a hybrid **mutual exclusion algorithm** for distributed system by multiplexing between Raymond's and Maekawa's algorithms when communicating within and across clusters, based on load, latency and throughput.

HONORS & AWARDS

Year	Rank	Event
2023	top 1/20	CTF at F5 India
2023	BeF5 Award	F5 Global
2023	3/500	Security Hackathon at F5 Global
2018	99.2 Percentile	GATE'18 -Graduate Aptitude Test in Engineering

SCHOLARSHIP AWARDS

Period	Award
2018-20	MHRD [2years] - Ministry of Human Resource Development
2013-17	PMSS [4years] - Prime Minister's Scholarship Scheme