Sohan Patil

Github: github.com/sohanpatil
Portfolio: sohanpatil.github.io

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Skills

Languages: *Proficient* - Java, C, Go, SQL, HTML / CSS; *Prior Experience* - Python, Swift, PHP, Shell, Javascript

Tools and Frameworks: Kubernetes, Docker, AWS, RabbitMQ, Linux Networking, NoSQL, Pandas, D3.js, Hadoop Stack, NodeJS, Angular, Spring, Flask, ASP .Net, JSP, Mobile (Android, iOS), Maven, GIT, JIRA

Education

State University of New York at Stony Brook Stony Brook, New York
M.S. in Computer Science; GPA: 3.8/4 *Aug 2019 - Dec 2020*

- **Coursework**: Distributed Systems, Databases, Data Science & Analytics, Human Computer Interaction, Algorithms
- **Teaching Assistant** (CSE 373, Analysis of Algorithms): Coached a class of 200+ students through semiweekly 1-on-1 office hours

Government College of Engineering Aurangabad, India
B.E. in Computer Science and Engineering; GPA: 8.35/10 *July 2013 - June 2017*

- **Coursework**: Operating Systems, Computer Networks, Statistics, Web Development, Parallal Computing, Image Processing

Work Experience

Nutanix San Jose, California
Software Engineering Intern *June 2020 - Aug 2020*

- Achieved a 25% boost in pod networking performance by implementing a hypervisor native Kubernetes CNI-IPAM plugin for Nutanix's managed Kubernetes service. Tools used: Kubernetes, Go, gRPC, Netfilter, Open vSwitch
- Invented a 67% cheaper Disaster Recovery solution for "Clusters on AWS" product featuring 1 minute per recovery point objective and 15 minute recovery time objective (Won 1st place in UHack '20). Tools used: AWS, Wireguard, Zookeeper

Principal Financial Group (PFG) Pune, India
Software Engineer *July 2017 - Aug 2019*

- Engineered an in-house Optical Character Recognition based claims processing tool, replacing IBM's Datacap, thus saving $500,000 per year in licensing costs. Tools used: PyTesseract, Spring, Angular, OAuth2
- Saved 150 working hours per sprint by instituting a batch synchronization tool between on-premise data warehouse and public cloud, . Tools used: Mulesoft, DB2 LUW, Salesforce Cloud API
- Slashed go-live time to 30% as a consequence of automating day-to-day maintenance tasks around Git and code vulnerability analysis. Tools used: Shell, Selenium, HP Fortify, SONAR
- Mentored six interns on domain knowledge as well as Agile practices, Git, Angular and Bootstrap Framework

Key Projects

- **KVStore:** Built a fault-tolerant, serializable distributed key-value store using Raft algorithm for consensus in Go (Fall '19)
- **Distributed MapReduce**: Built a MapReduce scheduler capable of relaunching failed map/reduce jobs in Go (Fall '19)
- **EyeCanDo** (bit.ly/eyecando): Working towards disability inclusion by employing Apple's ARKIT2 to enable ALS patients to use remodeled iOS apps like Notes, Mail, Smart Home and Music by simply tracking their eye movements
- **COVID-19 Analysis:** Used Hadoop MapReduce and Spark to process (Spring '20) COVID-19 datasets while visualizing the insights using D3.js framework. Used spatial databases to find hospitalization trends (Spring '20)
- **Slide to Type**: Built a multi-channel sokgraph detection tool using SHARK^2 algorithm as a clone of SwiftKey keyboard, using Flask. Used multiprocessing module to boost gesture recognition speed to 5x (Fall '19)
- **Spoiler Blocker Chrome Plugin**: Used JQuery & TMDb API to blur Facebook wall posts with movie spoilers (April '19)
- **Simple DB**: Implemented a basic clone of SQLite which uses B Tree and B+ Tree as Index and Page file nodes (Jan '19)
- **Remote File Security System**: Used C# & .Net Framework to create a secure desktop file manager operable through an Android app via RPCs. Helped users to view, delete, encrypt, decrypt, hide personal files on a shared computer (2017)

Awards & Achievements

- **1st place, Nutanix UHack '20**: Won the intern hackathon against 45 other candidates by assesing current Disaster Recovery solutions for "Clusters on AWS" and developing a low-cost (67% cheaper) alternative (July 2020)
- **1st place, PFG Hackathon**: Used Google Web Speech API & ML to manage JIRA service tickets through voice (Jan 2019)
- **1st place/800+, Rising Star Award**: Recognized as the best performer below 3 years of experience for delivering 2.2x of expected agile story points in Q3 & Q4 of 2017 (awarded in May 2018)
- **2nd place/75000+, SEED IT Idol** (bit.ly/seed-winners): An intercollegiate state level coding competition (Apr 2016)