Sohan Patil

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

LinkedIn: linkedin.com/in/patil-sohan
Email: sdpatil@cs.stonybrook.edu
Mobile: +1-631-800-6179

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 via semiweekly office hours
- **Advanced Project** (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 tracking their eye movements

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, Parallel Computing

WORK EXPERIENCE

Nutanix   San Jose, California
Software Engineer 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

Principal Financial Group (PFG)   Pune, India
Software Engineer   *July 2017 - Aug 2019*
- Engineered an in-house Optical Character Recognition based claims processing web 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 by 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 distributed key-value store using Raft algorithm for consensus in Go (Fall '19)
- **Distributed MapReduce**: Developed a MapReduce scheduler able to relaunch failed map/reduce jobs in Go (Fall '19)
- **COVID-19 Analysis:** Used Hadoop MapReduce and Spark to process COVID-19 datasets while visualizing the insights using D3. Investigated hospitalization trends using spatial databases (Spring '20)
- **Slide to Type**: Developed a multi-channel sokgraph detection tool using $SHARK^2$ algorithm as a clone of SwiftKey keyboard, using Flask. Incorporated Python multiprocessing to boost gesture recognition speed to 5x (Fall '19)
- **Simple DB**: Implemented a basic clone of SQLite which uses B Tree and B+ Tree as Index and Page file nodes (Jan '19)
- **Transaction Fraud Detection:** Used logistic regression to forecast fraud credit card transactions with 84.5% accuracy. Reduced bias due to imbalanced training data with the help of Synthetic Minority Oversampling Technique (Sept '19)

AWARDS & ACHIEVEMENTS

- **1st place, Nutanix UHack '20**: Won the Nutanix intern hackathon against 45 other candidates by assessing current Disaster Recovery solutions for "Clusters on AWS" and developing a 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+, PFG Rising Star Award**: Recognized as the best performer below 3 years of experience (May 2018)
- **2nd place/75000+, SEED IT Idol** (bit.ly/seed-winners): An intercollegiate state level coding competition (April 2016)

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, scikit, Hadoop Stack, Node.js, Angular, Spring, Flask, ASP .Net, JSP, Mobile (Android, iOS), Maven, GIT, JIRA