

# Prateek Narendra

Website : <https://pnpninja.github.io>

Email : [pnarendra@cs.stonybrook.edu](mailto:pnarendra@cs.stonybrook.edu)

Mobile : (631) 268-5879

## EDUCATION

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- **Stony Brook University** Stony Brook, NY  
*Master of Science in Computer Science* *August 2019 - Dec 2020 (Expected)*
- **National Institute of Technology Karnataka** Surathkal, India  
*Bachelor of Technology in Information Technology* *July 2012 - May 2016*

## PROGRAMMING SKILLS

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- **Relevant Coursework:** Distributed Systems, Operating Systems, Network Security, Data Science, Web Technologies
- **Languages:** Java, Python, Golang, C++, C, HTML, JavaScript, jQuery, Angular, SQL/NoSQL, Scikit Learn
- **Technologies:** Spring Boot, MySQL, MongoDB, Linux, Docker, Heroku, GCP, Hazelcast, ZeroMQ, Splunk, Grafana, Selenium

## EXPERIENCE

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- **Visa Inc.** Bangalore, India  
*Software Engineer* *July 2016 - May 2019*
  - **API DAST:** Developed modules in Python and Java to verify SSL requirements, test Message Level Encryption, SQL Injection and OS Command Injection vulnerabilities in external APIs to enforce Visa Cybersecurity requirements. Reduced average testing time by 15% for Penetration testers.
  - **Apeiron:** Developed backend modules for File Upload, Business Planning and User Access Control using Spring Boot and Angular. Reduced average response time of the application used by our business analysts by integrating Hazelcast caching.
  - **Vulnerable Library Detector:** Designed a tool using Java Reflections API to detect insecure 3rd party libraries used in Java Applications to enforce technical security standards set by Visa Cybersecurity
  - **Real Downtime Impact Calculator:** Engineered a Spring Boot tool to calculate unique number of failed transactions during server downtime and categorize the types of failures. Reduced average investigation time by 12%
  - **Handover Automation Tool:** Built a tool to aggregate all the error reports from emails, alerts from Splunk and daily transaction volume dashboard from Grafana into a single report for upper management.
- **MoneySmart Inc.** Bangalore, India  
*Software Engineering Intern* *May 2015 - June 2015*
  - **Transaction Reconciliation System:** Developed a Ruby on Rails module to reconcile financial transaction data between Yodlee API and SMS from user's mobile devices
  - **Data Analytics and Visualizations:** Wrote Python scripts to analyze transaction data to categorize users and created a visualization dashboard for Business Analysts

## PROJECTS

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- **Distributed Systems - Distributed Key-Value Store:** Implemented a Replicated State Machine and built a Fault Tolerant Database that stores Key-Value Pairs using RAFT Consensus Algorithm in Golang.
- **Security - Device Based Federated Login:** Architected and implemented an authentication and authorization mechanism using Django and React Native by leveraging phones to operate as the authorization and resource server
- **Security + ML - Web Tracker Analysis:** Analyzed the efficiency of Firefox's Tracking Protection in blocking ads without breaking website functionality on the top 10000 websites by performing ML Assisted Screenshot Analysis
- **NLP + ML - Graph Based Recommendation System:** Designed a system to recommend other users to follow based on semantic information extracted from generated content and the underlying social graph structure to identify closely connected groups of users (cliques). Implemented clique algorithms to correct the interested topics a user is interested predicted by the ML models. **Paper published in Springer Journal**
- **ML - Evaluation of various Dimensionality Reduction Algorithms:** Developed qualitative and quantitative metrics to select the most appropriate dimensionality reduction algorithm (PCA, t-SNE, UMAP) for a given dataset before developing a ML model over the reduced dataset.

## OPEN SOURCE CONTRIBUTIONS

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- **DuckDuckGo Instant Answer:** Deployed a feature using Perl to display the quote for the day on the search engine
- **NSETools:** Developed and deployed a Maven Artifact to scrape stock exchange data in almost real time for no charge