

Shantanu Singhal

633 Langdon St, Apt 507, Madison WI 53703 | +1 (608) 960-0027

shantanusinghal2709@gmail.com | github.com/shantanusinghal | linkedin.com/in/singhalshantanu

Full stack developer and machine learning enthusiast, with 4 years of experience in designing, developing and delivering high quality enterprise software. Strong Object Oriented design, system design skills and expertise in building distributed web services, big data systems and continuous integration and delivery pipelines. In depth experience using Java, Spring, Hibernate, Python, Javascript, AngularJS and writing clean code using XP/Lean practices. Extensive experience leading and collaborating with cross-functional distributed Agile teams and actively managing technical debt and changing requirements.

EDUCATION

Master of Science (MS) – Computer Science: University of Wisconsin, Madison (US) – May 18 GPA: 3.6

Bachelor of Engineering (B.Eng) – Computer Science: University Of Pune (India) – June 12 GPA: 3.7

WORK EXPERIENCE

Data Analytics Intern — UW Health, Madison WI Oct 2017 – May 2018 (8 months)

- Designed a HDP Hadoop (data-lake) cluster. Created a detailed threat-response model to authenticate identity of users and services, authorize data access, secure data at rest or in motion and, do auditing and monitoring.
- Building pipelines to preprocess and transform raw clinical data to create curated datasets for further research.

Keywords: ASF Hadoop Stack, Hortonworks HDP, Apache Spark, Spark-ML, Java, Python, Pandas, NumPy, Scikit-learn

Lead Software Engineer — PTC, Pune, India October 2013 – August 2016 (3 years)

- Designed and developed the web services for PTC XLA using asynchronous RESTful microservice architecture.
- Developed a content editor for LMS using AngularJS for frontend and Git based API for versioning the courses.
- Technical leadership in identifying & addressing technical debt, evaluating architectural solutions, onboarding new engineers, ensuring best-practices in testing and deployment and debugging critical production issues.
- Used Agile practices to create short release cycles, reduce risk, increase transparency and foster collaboration.

Keywords: Java, AngularJS, Wicket, JGit, Spring Boot, Microservices architecture, Junit, Jasmine, Karma JS, Selenium

Software Engineer — Equal Experts, Pune, India July 2012 – September 2013 (1 year)

- Built an iOS app with RESTful web services and NoSQL database to allow SMBs to run loyalty programs; Giftbak
- Redesigned the backend APIs for European Directories to improve performance, reliability and interoperability
- Created automated test suites in cucumber and jasmine to capture user scenarios. Created CI workflows.

Keywords: ObjectiveC, JS, Node.js, Groovy, Gradle, Spring, Hibernate, MongoDB, Jasmine, Jenkins, Junit, Mockito, Spock

PROJECTS

Generative Adversarial Network: Machine Learning

Built a Deep Convolutional GAN using LeNets, and trained on MNIST to generate new handwritten digit samples.

Graph Convolutional Networks for generating vertex embeddings: Machine Learning

Extended GCNs with Aggregator-Encoder model and mixed sampling, allowing it to scale for all graph sizes.

Style Transfer CNN: Machine Learning

Defined separate style and content loss functions and used a VGG CNN to recreate an image in a different style.

Keywords: GAN, GCN, CCN, LeNets, Python, NumPy, SciPy, Sklearn, Pandas, NumPy, matplotlib, Torch, TensorFlow, GCP

Amazon and Apple music: Data Analysis

Crawl, scrub, transform, sample, merge and analyze music label data to identify trends and contributing factors.

Keywords: Python, NumPy, Pandas, Scrapy, beautiful-soup, Magellan, HTML, Jupyter Notebook

WithU: Android Application

Developed an Android app with a Firebase backend to prototype a simple alternative to UW's SafeWalk program.

Keyword: Android, Java, Firebase, Material Design, Google Maps/Places API, Espresso, Robolectric, PowerMock, Gradle

SKILLS

LANGUAGES (Proficient) Java, Python, JavaScript (Intermediate) Kotlin, Scala, Groovy

DESIGN Object Oriented Design, XP, TDD, BDD, SOLID, Lean, Infrastructure as Code, CI/CD

DATABASES Hive, HBase, MySQL, Oracle, MongoDB **DEVOPS** Docker, AWS, GCP, Jenkins, Linux, Git