

Smarth Arora

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San Jose, CA

EDUCATION

San Jose State University	M.S. Software Engineering	Aug 2022 - May 2024
Punjab Technical University	BTech Computer Science	Aug 2014 - May 2018

SKILLS

- **Languages and Frameworks:** Python, Core Java, HTML, JavaScript, Django, Flask, LINUX/UNIX
- **Cloud Technologies:** Ansible, Docker, Kubernetes, AWS EC2, AWS S3, AWS RDS, AWS SQS, AWS SNS, AWS CloudWatch, AWS ELB, Terraform, AWS Lambda
- **Databases & Tools:** MongoDB, MySQL, PostgreSQL, Firebase, RabbitMQ, Celery Queue, Flower, Kibana, Munin, Prometheus, Grafana, Datadog, Jenkins, Nginx, Git, Shell Script, MQTT
- **Web Technologies:** React, SpringBoot, Node.js, Express.js

WORK EXPERIENCE

- Brivo | Software Engineer III** June 2023 -
- Developed and scaled Brivo SmartHome, a cloud **SaaS** platform that delivers access-control, automation, and resident services for hundreds of multifamily communities and tens of thousands of end-users, **ingesting telemetry from 20 K+ gateways and 100 K+ IoT devices in real time.**
 - Engineered scalable REST APIs using **Django REST Framework**, integrated real-time communication via MQTT brokers **HiveMQ/MosquittoMQ**, implemented asynchronous processing pipelines with **RabbitMQ** and **Celery** workers (monitored by Flower), achieving sub-second processing of millions of device messages per day and live UI synchronization via **Firebase**.
 - Improved platform stability and reduced database query latency by **~50%** through strategic **Redis** caching for gateway data; optimized complex legacy **Django ORM & SQL Functions**, and executed large-scale data migrations in PostgreSQL, significantly enhancing API responsiveness.
 - Revamped and modernized the CI/CD pipeline infrastructure across multiple **Bitbucket** projects, transitioning build automation in Python-based workflows, leveraging Poetry caching strategies, resulting in approximately **40–50% faster builds creation, test and deployment**, significantly enhanced developer productivity.
 - Strengthened platform monitoring, observability, and debugging by integrating **Datadog, Prometheus, Grafana, Munin, Kibana**, and **CloudWatch**, Docker-based environments, enabling faster diagnostics and improved system resilience.
- Zscaler | Software Engineer** Jan 2018 - Aug 2022
- Developed and maintained the **Cloud Deployment Application (CDA)**, Zscaler's internal **CI/CD** system used to deploy and install core platform binaries across **20,000+** distributed units—achieving a **60% reduction** in deployment time via **Ansible** automation, **Docker** containerization and **Kubernetes**-based orchestration.
 - Built and optimized core server-side applications (**Python, Flask, Django, Unicorn, Nginx**), integrating custom Ansible modules and playbooks; improved CDN delivery **efficiency by 40%**, reduced manual configuration errors by **~50%**, and increased cloud service reliability across multiple global regions.
 - Architected modular deployment pipelines in CDA v2 with support for pre- and post-deploy validation, automated rollback, transient failure recovery, and rapid rollout strategies; standardized infrastructure provisioning via dynamic Ansible inventories, enabling **repeatable and auditable deployments across 7+ cloud regions**.
 - Led the creation and implementation of the Cloud Configuration Management System (CCMS), efficiently auditing configuration consistency on **20,000+ VMs**, cutting audit processing times by **50%**; provided technical mentorship and guided intern teams through successful project delivery.
 - Developed scalable Python-based automation APIs to orchestrate complex Ansible workflows across 10,000+ cloud nodes, enabling **parallel** task execution, **encrypted** payload handling, and real-time deployment status aggregation.

PROJECTS

- **GroceryGo** (Dec 2022) - Built a distributed, microservices-based e-commerce platform using **Node.js, Flask, and PostgreSQL**, deployed entirely on AWS infrastructure. Leveraged Amazon **EC2** and AWS **Fargate** for scalable compute, Amazon **RDS** for database services, Amazon **S3** for static storage, and integrated AWS **API Gateway** and AWS **Lambda** for serverless operations..
- **TastyGenie** (Oct 2022) – Developed an AI-driven recipe recommendation app using **Python, React, PostgreSQL, and Scikit-learn**, delivering personalized suggestions based on user preferences and dietary restrictions. Enhanced recommendations using **NLP** techniques and predictive modeling; integrated **AWS SageMaker** for scalable model training and **TensorFlow** for future deep learning capabilities.

HONORS & REWARDS

Received **Bravo awards** from Zscaler in March 2019 and July 2021 for automating **Ansible Playbooks** with Python and leading **cross-team coordination** and contribution to executing a new time-saving cloud upgrade mechanism, respectively.