







SANCHIT SHARMA

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Experienced Software Engineer, Team Lead and Architect with 7+ years experience in product conceptualisation and building distributed service oriented architecture at a fast paced startup.

TOOLS & LANGUAGES

 Programming Languages Proficient - Python. Familiar - Java, C++, Go	 Web Technologies Django, Javascript, Flask React basics Familiar - Vue, Angular	 Databases PostgreSQL, InfluxDB, Worked with Druid, ElasticSearch	 Data Analytics pandas, numpy
 Communication Protocols HTTP, MQTT, Modbus.	 DevOps Ansible, Grafana, Docker, Kubernetes	 Cloud Environments Azure, AWS, GCP	 Others Kafka, Airflow, Redis, Celery

PROFILE SUMMARY

Joined **Zenatix** - an IoT startup as **employee #1** in Nov 2013. It was acquired by Hero Electronix, a Hero group company in May 2018. Now a 100+ people organization with 12 people tech team.

Owned **product development** based on customer and internal needs. In 6 years, gained experience in developing, maintaining IoT applications, Django based web applications and cloud data pipeline. Worked with the co-founders and a cross-functional team of data scientists, designers, operations and support. Optimized hiring process while recruiting 8 software engineers in 12 months within a constrained budget.

EDUCATION

CGPA 8.12,
B. Tech. (Computer Science)

IIIT-Delhi

📅 2009 - 2013

91 %, XII CBSE

Jaspal Kaur Public School

📅 2008 - 2009

85.8 %, X CBSE

Jaspal Kaur Public School

📅 2007 - 2008

EXPERIENCE

Product Owner, Consultant

VideoKen

📅 September 2020 - Present

- **Question Bank** Lead the design and backend development of in video question bank feature including search and analytics.
- **Service Ownership** Took ownership of multiple orphan services without documentation for facilitating bug fixing and maintenance.
- **Customer Interaction** Interacted with major B2B customers to understand their needs and prioritize feature development.

Backend Software Lead, Consultant

VideoKen

📅 February - August 2020

Worked 3 days a week for maintaining, scaling and adding features to backend of video analytics product by VideoKen. Mentored a fresher to get him up to speed with the monolith and independently contribute to it.

- **Rapid Up to Speed** Took complete ownership of a monolith within a month without any documentation and help.
- **Robustness** Setup custom error reporting on slack and made debugging easy via logging appropriate request logging throughout services.
- **3rd Party Integrations** Did multiple 3rd party integrations with backend including Zoom, Youtube and Zapier.
- **Disaster Recovery** Module for making video event logs to be robustly recoverable in case of unprecedented failures, for example [this hack](#).

Architected and led cloud side of development. Developed growth culture in tech team and incorporated best practices for development, meetings and work reporting.

- **Kafka Based Data Pipeline** - Architected and led infrastructure development for MQTT ingress at scale into Kafka for streaming, archival and analytics.
- **Monolith to Microservices** - Led the breaking up of a monolith into 8 Django based services talking to each other over REST.
- **ORM for sMAP** - ORM over query layer of sMAP (proprietary timeseries database) as a Django library. Formed the core of most services in the stack.
- **WattMan** - Configurable dashboard for customers to consume reports, key metrics and alerts.
- **Control Deployment Module** - Dashboard to deploy automation actuation rules across 100's of IoT Gateways.
- **Error Reporting** - Developed a Django library for logging and reporting of domain specific errors.

Technical Lead, IoT Cloud Group

📅 April 2015 – March 2018

Zenatix

Built and mentored a team of 7 developers. Responsible for providing a roadmap and subsequent delivery of IoT Cloud stack.

- Following frameworks were designed to enable data science team in deploying their code for customer/internal use cases -
 - **Alerting** - Real time stream analysis on incoming (single or group of) timeseries and sending notifications via email/sms.
 - **Reporting** - Framework to enable data-science team to add new python functions/classes as reports which could be mailed or shown on dashboard.
 - **Metrics** - Framework to make computed timeseries using code by combining and processing existing timeseries based on business use case.
 - **Issue Reporting** - For interpreting problems in devices on fields based on the health timeseries data reported by them.
 - Led the dockerisation of existing services.
- **Device Management Platform** - Cloud + edge modules for monitoring, versioning and updation of software/configuration in IoT Gateways. Mentored in design and implementation.

Software Engineer

📅 November 2013 – March 2015

Zenatix

- Developed and maintained from scratch -
 - **Energy Web App** - Django Web app for visualising data trends, analysis, reports and alerts, forming core of the various products sold.
 - **Data Collection Module** - Modular framework for adding new sensors.
 - **Scheduling Framework** - Framework for automated actuation of devices/sensors handling complicated edge cases.
 - **Edge Health Module** - Scripts for reporting health of networking, cpu et al. metrics of IoT Gateways and self-healing.
- Forked open source repos and deep-dived into the code to fix production stalling issues
 - **readingDB** - Timeseries database built on top of Berkley DB.
 - **sMAP** - Archiver, data collection and query framework for timeseries data built on top of readingDB.
 - **OpenWRT** - Compiled a custom image of the open-source OS with custom scripts to work in Zenatix routers (deployed live in more than 1500 locations) - *blog-post*