# Sathiyanarayanan Palani

Solutions Architect

## Contact

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## About Me

Solutions Architect with **~8 years of experience in Python development** for infrastructure tooling, and scalable software design. **Published 6+ PyPI packages with over 76k+ lifetime downloads**, used by developers worldwide**. Spent 4.5 years leading end-to-end architecture, development, and mentorship as Founding Engineer in a fast-paced startup environment.**

A self-directed problem solver with a neurodivergent perspective, known for consistently owning & delivering reusable, production-grade tools and championing engineering best practices across teams.

## Skills

- Analytical Thinking
- Problem Solving
- Pattern Recognition
- Systemic understanding
- Emotionally Resilient
- Outcome Oriented

## 🎓 Education

### BE - Electrical & Electronics Engineering
*AIHT, Affiliated to Anna University*    2013 - 2017
- Graduated with a **first class**,
- Final Year project: Automatic Attendance System using Face Recognition with OpenCV and Raspberry Pi

### HSC
*ARLM Matric School, Cuddalore*    2012 - 2013
- Completed with 85%

### SSLC
*SRV Matric School, Trichy*    2010 - 2011
- Completed with 85%

## 💼 Experience ( ~8 years )

### Telemetry Software Data Engineer
*Intel SRR, Bangalore*    Nov 2023 - Present
- ETL-Pipeline - Built Data harvesting pipelines for bulk insertion to elastic.
- Telemetry-UI - Built Scalable Web UI framework (with MVC & Dash UI).
- QTOPP - Mentored juniors in building Queued Tasks on Process Pools that sends automated statistical calculation results via SMTP.
- EBDT - Built an ecosystem of tools for data collection from edge to cloud.

### Semiconductor S/W Product Development Engineer
*UST Global, Bangalore*    May 2022 - Oct 2023
- Owning test & telemetry code reviews, release process & guiding juniors.
- Implementing Serial-Over-Lan with IPMI & monitoring threads for auto-retrying ssh connections during target reboot.
- Scripts to upload redfish data from OpenBmc OData rest api to influx db.

### OSS PyPI Package Dev as Volunteer, Cuddalore *(Jan 2022 - Apr 2022)*

### Senior Engineer at Ielektron tech, Chennai *(Oct 2018 - Dec 2021)*

### Software Validation Engineer
*Mercedes Benz ADAS, Bangalore (as external)*    Apr 2019 - Dec 2021
- Written python scripts on HIL-scenarios for validation of ADAS signals.
- HIL process Automation done via SSH, paramiko & SCP based scripts.
- Design & development of Test case generation scripts with pandas data frames as pre-HIL execution task based on test configuration.
- Runtime dynamic analysis of ADAS utility modules in c using ASTREE.
- Unit testing, L2 testing done using C++ Google test framework on ADAS.

### Python Developer
*SAFRAN Aerospace, Bangalore (as external)*    Oct 2018 - Mar 2019
- Responsible for Multi-Display Broadcast over local Network using TCP/IP.
- Scripting done for fusion of raw data from sensor grid control units to display them together for holistic understanding of the system.
- Developed event classification algo based on volumetric data differences.

### Embedded Software Developer
*Ielektron Technologies, Chennai*    Jul 2017 - Sep 2018
- Improving Embedded Software unit and functional Testing of internal security products with adoption of industry best practices.
- Development of semi-automated hardware testing platform for Renesas Microcontrollers using Iron-python Renesas APIs & JTAG debuggers.

# 🛠 Professional Skills

## Languages

- *C, C++, Python, Shell & Batch basics*

## Operating Systems

- *Linux, Windows*

## Communication Protocols

- *UART, I2C, SPI*

## Networking Protocols

- *TCP/IP, UDP, HTTP, MQTT, SQL, Postgres, Elastic, Prometheus, OTLP Basics*

## Web Technologies

- *Fast API, Flask, React UI, next.js, shadcn/ui basics*
- *LogExAnWebApp (Fast API, Flask)*
- *ScEqAnWebApp (Fast API, React UI)*

## Machine Learning

- *OpenCV, Tensorflow, Pytorch, Keras, OpenVINO, VGG16-senet50-TL.*
- *mlp-demo*
- *senet50-TL*
- *mask-rcnn*

## Tools & Libraries

- ***Testing***: *Gtest, FFF, pytest*
- ***Data Analysis***: *pandas, numpy, polars*
- ***Visualization***: *matplotlib, plotly, dash*
- ***Scripting/Utilities***: *paramiko, SCP, pyYaml, rich, lark – parser*
- ***Databases***: *MySQL, sqlalchemy*
- ***pip libs***: *OpenCV, Tkinter, diskcache, multiprocessing,*
- ***Data exporters***: *elasticsearch, prometheus_api_client, Kibana, Grafana*

## DevOps & Deployment

- *Jenkins, Github Actions & self-hosted runners*
- *GCP (Credential API's, Artifact registry, Cloud run), AWS Basics (EKS), Kubernetes, Docker, Ansible basics.*
- *ansible-LogExAnWebApp-deployment*

## Computational Art

- *Computational Art*

## SCM

- *Git, Github, Gitlab*

# 🏆 Notable Highlights

- ***Worked 4.5 years driving significant tech decisions, as Founding Engineer*** *to create measurable Impact that enhances customer delight.*

- ***Neurodivergent developer*** *— rapid adaptive learning, pattern-based systems thinker, independent delivery from concept to production.*

- *EBDT -* ***Built an ecosystem of tools for data collection from edge to cloud***, *submitted as a proposal to European Test & Telemetry Conference '25. (declined as out of scope)*

- *Currently* ***working on community-based-research-initiative to quantify & improve media literacy*** *of common public for empowering fact-checking committees. ( Phylum-Tardigrada )*

- ***76,000+ total lifetime downloads across 6 published packages***. Available via PyPI and GitHub.

|  |  |  |  |
|---|---|---|---|
| **LogExAn**<br>( 16k downloads ) | **ScEqAn**<br>( 14k downloads ) | **py4cli**<br>( 9k downloads ) | **py4mbd**<br>( 650 downloads ) |
| | **Idaikuri**<br>( 21k downloads ) | **Thodarkuri**<br>( 17k downloads ) | |