SURAJ JHA

Hyderabad, India | LinkedIn | +91 9315441280 | suraj.jha96@gmail.com

EDUCATION

Birla Institute of Technology and Science, Pilani — **Rajasthan, India**
Bachelor of Engineering(Hons.), Electrical and Electronics Engineering — *Aug 2015 – May 2019*

- Course work : OOP, OS, Neural Networks & Fuzzy Logic, Linear Algebra, Calculus, Optimization
- CGPA: 8.2/10

WORK EXPERIENCE

Airlinq.ai — **Hyderabad, India**
Software Engineer - AI / ML Research — *Nov 2023 – present*

- **Tech stack : Generative AI (LLM + RAG) , vector databases , python , React**
  - Leading development of AI tool for Daimler Trucks to automate car service management chain using generative AI.
  - Led Development of reporting tool for America Movil. Tech Stack used - Metabase , sql , java
  - Designing front end for IOT market place using React.js

Samsung Research Institute (SRIB) — **Bangalore , India**
Senior Software Engineer, On Device AI - System Intelligence team — *Jul 2019 – April 2021*

- **Thermal Foresight Engine**: (**Paper: IJCNN '21**) to predict & mitigate device overheating issues
  - Developed a backend Android Service to host an LSTM model to forecast skin temperature of mobile devices
  - Designed & Trained an LSTM model with avg. error of 0.7 degrees.
  - Developed ML pipeline to read data from Android kernel.
  - Commercialized in Samsung smartphones , used by Samsung's gaming & 5G teams.
- **Ambient Temperature Estimation**: (**Patent submitted**)
  - Developed a backend Android Service to host an Neural network to forecast ambient room temperature
  - Trained & feature engineered a deep neural network with avg error <1.2 degrees.
- **Performance Boost Engine** supporting profiles for multiple use-case scenarios for heavy tasks.
  - Served as a platform for boosting in-house services. Commercialized in Samsung smartphones.
  - Controlled Android kernel tunables using Reinforcement Learning to reduce file encryption & decryption time by 28%.
- **Samsung Adaptive Battery (SAB)** : classifies application into 3 buckets : "active", "working set" & "restricted".
  - Resolved app's bucket persistence issue by penalizing false positives for active buckets & changing optimizer from SGD to Adam so that learning rate adapts more effectively to shifts in user preferences.
- **Gyroscope bias reduction for camera stability**
  - Devised an algorithm using exponential decaying with sliding-window technique to remove noise & bias in gyroscope readings.
  - Developed an api for sensitivity controlled camera stability.
- Mentored a team of interns in research projects as part of Samsung's industry-academia collaboration program, PRISM.

Samsung Research Institute (SRIB) — **Bangalore, India**
Research Intern, On Device AI - System Intelligence team — *Jan 2019 - June 2019*

- Developed an AI-powered user behavior modeling system using LSTM based architecture to optimize device performance by accurately predicting the next app to be launched by the user.

PUBLICATIONS

- "Accurate Device Temperature Forecasting using Recurrent Neural Network for Smartphone Thermal Management," 2021 International Joint Conference on Neural Networks (IJCNN), Shenzhen, China, 2021, pp. 1-8, doi: 10.1109/IJCNN52387.2021.9533732.

AWARDS

- **Samsung Citizen Award : Tech Excellence in "Research to Development" award**: Received for driving Samsung's "Thermal Foresight Engine" to success through comprehensive research, impactful proof of concept, and seamless deployment.
- **Best Project Award** (Software Design Adaptive Technology)- *APOGEE BITS Pilani* - ***Hackathon Winner 2018***

SKILLS

Programming Experience: Java, Python, Algorithms, Data Structures, OOP, Generative AI, LLM, RAG, Deep learning, Machine learning, Tensorflow, Keras, SQL, Git, Android Development, Javascript

CERTIFICATIONS

- **Samsung Certified Professional**: Successfully cleared the Samsung Professional Certification Test in July 2019.
- Machine Learning - Andrew Ng (Stanford Online / Coursera)
- Deep Learning -(DeepLearning.ai)
- Improving Neural Networks: Hyperparameter tuning (DeepLearning.ai)
- Structuring ML projects (DeepLearning.ai)