

# Giri Gopalan

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## Qualifications:

- 20+ years of wide ranging experiences across wide ranging technologies:
  - Bootstrapping a couple of startups from scratch and being involved in all aspects of its operations – including product concept, design, manufacturing operations, QA, etc.
  - Hardware and software design and implementation, rapid prototyping of hardware and software systems.
- Experience with Big Data systems
- Recent experience with: Computer Vision (**OpenCV**), Machine Learning/Deep Neural Nets and IoT (building several systems based on Raspberry Pi)
- Recent Experience with: scikit-learn, Tensorflow, Keras
- Languages: **Python** (intermediate to advanced); C & C++ (basic)
- Solid knowledge of IP networking protocols

## Work Experience:

### **Aruba Networks/HPE, Senior Director, AI and IoT Labs, Mar 2017 – Present.**

- Bootstrapping new products within Aruba to enable it to enter the ComputerVision and IoT market.
- Conceptualized, designed and implemented a project (end-to-end) called Neutrino that involves Computer Vision based applications for Smart Buildings.
  - Project involves getting video streams from various cameras, detecting persons and objects (using DNNs) and providing useful analytics.
  - Implemented this product end-to-end (sensors/cameras all the way to Flask based UI framework)
  - The various components used in this project are:
    - Standard surveillance and Raspberry Pi based cameras
    - OpenCV and off-the-shelf DNN model (MobileSSDV1) for object detection
    - Infrastructure components: Kafka, Cassandra and a UI based on Flask
  - Currently working on moving the project into AWS using AWS IoT Core and Lambda services.
  - This project is partially completed. A helpdesk analyzer and room occupancy app are online. Working on people counter and object tracker apps.
- Experimented with face recognition systems, human pose tracking systems (for biometric identification)
- Transitioned various Niara Inc. projects and responsibilities to Aruba/HPE internal processes.

### **Niara Inc (acquired by Aruba/HPE), Co-Founder, May 2013 – Mar 2017**

- As one of the founding engineers, took on many roles to steer the company to a successful acquisition by Aruba/HPE
- Involved in the early stages of the company formation from problem statement, defining addressable market, proposing and implementing a solution, etc.
- Worked with other systems and software engineers during the early system design phase to define and implement a Big Data system based on Hadoop. I mostly implemented the system hardware portion of it.

- Managed a small QA group that tested Niara's entire product solution, including its Big Data System. As a hands-on manager, I implemented many of the tests including:
  - Full system performance tests for the two major components of the system (the sensor and the analyzer)
  - Implemented a correlation tested that sanity tested the systems ETL
  - Designed and implemented the QA groups' infrastructure
- At the same time, headed the Hardware, Operations and Manufacturing functions for Niara's appliances. Designed and implemented various processes to enable smooth manufacturing and operations while working on a tight budget and timelines.

### **Stoke Inc, Principal Engineer/Director, May 2010 – May 2013**

- Specified, designed and implemented a very complex line card for Stoke's existing chassis. This extraordinarily complex card contained 3 complex and high-powered CPUs (two Broadcom XLPs and once Freescale CPU), a 10Gbps switch (Broadcom Trident), two TCAMs and several other components. Overcame many challenges – from placement, layout, routing, thermals and unstable silicon – to deliver the product on time.
- Designed and implemented a next generation management card for Stoke's chassis.

### **Aruba Wireless Networks, Senior Staff Engineer, Sep 2005 – May 2010.**

- Specified, designed and implemented several products, including: an intelligent switch, indoor and outdoor access points.
- Involved in the setup of JDM/ODM type manufacturing models with manufacturers based in Taiwan and China.

### **Previous Work Experience:**

This is a brief summary of past companies I have worked for. Can provide details upon request.

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| • Network General, Consulting Engineer                    | Jan 2004 – July 2005 |
| • Tahoe Networks, Founding Engineer                       | Jan 2001 – Oct 2003  |
| • Shasta Networks (acquired by Nortel), Founding Engineer | May 1998 – Jan 2001  |
| • NET, Principal Hardware Engineer                        | Oct 1993 – May 1998  |
| • NetExpress Inc (Member Technical Staff)                 | Dec 1992 – Sep 1993  |
| • Optima Computers Pvt. Ltd., India (Consultant)          | Jan 1992 – Dec 1992  |
| • CDAC., India (Member Technical Staff)                   | Aug 1989 – Jan 1992  |

### **Education:**

- BS in Electrical Engineering, BMS College of Engineering, Bangalore, India. Graduated in 1989.

### **Publications/Awards:**

- Co-author of "FPGA Implementation of the BH8000 Wormhole Router", published in the IEEE 1991 ASIC Conference and Exhibit.
- Part of team that won the "Vincent Bendix Award" in 1987 presented by Allied-Signal Inc., for building an 8 node parallel processor.