

# Simeon Babatunde

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## Summary

I am seeking a research internship position in **On-device Machine Learning**, **Intermittent Computing** and **Embedded Networked Systems**. My research explores new low-power wireless network solutions that are resilient to frequent and erratic power failures—common in emerging intermittent battery-free systems.

**Interest Areas:** Embedded Sensor Networks & IoT, Edge & Intermittent Computing, Embedded AI/ML, Data Science and Engineering.

## Technical Skills

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|--------------|--|
| Programming  | Embedded C/C++, Python, R, Java.   |
| Platforms    | MSP430, TensorFlow, Scikit-learn, Arduino, Autodesk Eagle, Contiki, SDR, Android, ELK stack (Elasticsearch-Logstash-Kibana), Apache Hadoop, OpenVINO, FastAPI. |
| Connectivity | BLE, LoRa, Zigbee, Sub-1GHz wireless solutions, Wi-Fi, 5G NR.  |
| Hardware     | ARM Cortex-M, TI MSP430xx, Raspberry Pi, PCB Design and Assembly.  |

## Experience

- 2018 – Now **Graduate Research Assistant**, PERSIST Research Lab, Clemson University, SC.
  - Research new low-power wireless network solutions for battery-free devices.
  - Coordinate the Embedded Networked Systems Seminar (CPSC 9500).
- 2017 – 2018 **Graduate Teaching Assistant**, School of Computing, Clemson University, SC.
  - Lead TA, CPSC 1071 (Programming Techniques and Methodology with C/C++).
  - Held lab. sessions, office hours, and managed a group of TA's.
- 2015 – 2017 **Data Engineer**, Venture Garden Group, Lagos, Nigeria.  
*Focus: Data Science and Engineering, Business Intelligence.*
  - Developed and managed a Data Lake built on Apache Hadoop ecosystem.
  - Powered the data driven governance initiative through advanced analytics.
  - Implemented a data consolidation strategy across strategic business units.
- 2014 – 2015 **Software Engineer**, Splashers Technologies, Lagos, Nigeria.  
*Focus: Mobile Application Development, Data visualization.*
  - Team lead, Mobile Application Development.
  - Developed the first mobile solution for financial settlement among stakeholders within the electric power sector.

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## Education

- May 2023 **Clemson University**, Clemson, SC, United States  
Ph.D. in Computer Science  
Advisor: Dr. Jacob Sorber
- Dec 2019 **Clemson University**, Clemson, SC, United States  
M.S. in Computer Science  
Received the 2019 ACM-UPE Academic Achievement Award
- Sept 2014 **Obafemi Awolowo University**, Ile-Ife, Nigeria  
B.S. in Computer Engineering  
First Class Honors, 4.6/5.0 GPA

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## Publications

- SenSys 2021 **Simeon Babatunde**, Arwa Alsubhi, Josiah Hester, Jacob Sorber. Greentooth: Robust and Energy Efficient Wireless Networking for Batteryless Devices. 19th ACM Conference on Embedded Networked Sensor Systems (SenSys 2021). (In Submission).
- SenSys 2021 Arwa Alsubhi, **Simeon Babatunde**, Nicole Tobias, Jacob Sorber. Stash: Flexible Energy Storage for Intermittent Sensors. 19th ACM Conference on Embedded Networked Sensor Systems (SenSys 2021). (In Submission).
- ENSsys 2020 Arwa Alsubhi, Nicole Tobias, **Simeon Babatunde**, Jacob Sorber. Can Crystal Oscillators Keep Time Without Power? 8th International Workshop on Energy Harvesting & Energy-Neutral Sensing Systems (ENSsys 2020).
- ArXiv 2020 **Simeon Babatunde**, Nirnay Jain, Vishwas Power. Long Range Communication on Batteryless Devices. ArXiv Preprint 2020.

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## Awards and Honors

- 2021 Recipient, **IBM Tapia Scholarship**.
- 2019 **UPE Academic Achievement Scholarship Award** for outstanding academic excellence in the Computing & Information Disciplines.
- 2015 **Outstanding Contribution to Consolidation Goals Award** for highest performing team within Venture Garden Group (VGG).