Kingsley Etonwana Nweye

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Education

- **University of Texas at Austin** — Austin, TX, United States
  Ph.D. - Civil Engineering; GPA: 4.000/4.000 — *Aug 2021 - Present*
  M.S.E. - Civil Engineering; GPA: 4.000/4.000 — *Aug 2019 - Aug 2021*
  Courses: *Data Mining, Energy Simulation in Building Design, HVAC Design, Smart Buildings & Cities, Sustainable Building Design*
- **University of South Carolina** — Columbia, SC, United States
  B.S.E. - Mechanical Engineering; GPA: 3.858/4.000 (Magna Cum Laude) — *May 2013 - May 2017*
  Courses: *Algorithmic Design, Engineering Optimization, Engineering Ethics, Fluid Mechanics, Heat Transfer, Thermodynamics*

Skills Summary

- **Programming**: Bash, Java, LaTeX, MATLAB, Python, SQL, Swift
- **Tools**: AutoCAD, AWS, EnergyPlus, eQUEST, Firebase, Git, Grafana, Inventor, Jira, OpenStudio, Raspberry Pi
- **Soft Skills**: Leadership, Public Speaking, Time Management, Writing

Experience

- **Utilities and Energy Management, University of Texas at Austin** — Austin, TX, United States
  Graduate Research Assistant — *Jan 2020 - Present*
  - **University of Texas Energy Hub**: Developed and maintained cloud architecture for the collection, storage and manipulation of data from over 1,000 utility meters and 200 buildings located on the university campus and micro-grid. The data were used to model energy and water consumption for the purposes of demand-side management, fault detection, project planning, billing, business intelligence and reporting. Employed technologies were AWS (Athena, API Gateway, Lambda, QuickSight, RDS PostgreSQL, S3) and Python.
  - **Comfort Kiosk iOS Application**: Developed Apple iPad application for thermal comfort polling to determine occupant indoor environment preferences and optimal HVAC zone set-point schedules. Tech: Firebase, Swift. Employed technologies were Google Firebase, Python and Swift.
  - **Building Energy Performance Modeling**: Developed and calibrated energy models for the evaluation of energy conservation measures in 3 existing buildings.
- **Intelligent Environments Laboratory, University of Texas at Austin** — Austin, TX, United States
  Graduate Research Assistant — *Aug 2019 - Present*
  - **Reinforcement Learning for Building Energy Management**: Led the development of CityLearn Gym environment v1.1.0 - present and researched on the use of reinforcement learning control for demand response and grid-interactive building applications.
  - **Occupant-Centric Control**: Developed cost-effective framework for the estimation of occupancy counts by leveraging existing Wi-Fi infrastructure as well as estimation of energy savings estimation from utilizing occupancy and smart meter data for HVAC equipment ramp up and setback scheduling.
  - **Publications**: First-authored 5 of 8 peer-reviewed full and poster paper publications.
  - **Mentorship**: Mentored 3 undergraduate and 2 graduate students in machine learning and building energy modeling projects.
- **CAEE Department, University of Texas at Austin** — Austin, TX, United States
  Teaching Assistant; Elementary Mechanics of Fluids Laboratory — *Jan - May 2021*
  - **Lecturing**: Lectured and supervised class of 30 undergraduate students on laboratory experiments and graded laboratory exercises and reports.
  - **Evaluation**: Received "very good" or "excellent" overall rating from 80% of responses in an anonymous mid-semester survey that had a 50% return rate.

Projects

- **NEURIPS'22 CityLearn Challenge 2022 (Reinforcement Learning, Net-Zero Buildings)**: Developed the CityLearn Gym environment v1.3.x used in the AIcrowd-hosted challenge where over 100 teams developed control policies for the management of home batteries to minimize electricity bill, carbon emissions and ramping. Tech: Python. (Jul 2022 - Present)
- **Intelligent Environments Laboratory COVID-19 Dashboard (Data Management, Analysis, Visualization)**: Designed a media-recognized dashboard that provided a multifaceted view of the COVID-19 impact on Austin, TX using open-source and private public health, economic, transportation, air quality, energy, water and social data. Tech: GitHub Actions, Python. (Mar 2020 - Present)

Awards

- Third place in Technical Demonstration category and $5,000 award for "Building Energy Intensity Toolchain" submission at Real Time Energy Management Global Energy and Building Hackathon by New York State Energy Research Development Agency - July, 2022

Activities

- **Co-President of TexASHRAE** — Austin, TX, United States
  Provided networking opportunities with local MEP professionals and firms for students. — *Aug 2021 - Present*

Interests and Hobbies

- DJ'ing, LEGO, Paintball, Running, Soccer, Weightlifting.