

# CHUKWUBUIKEM UME-UGWA

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## Objective:

A well-rounded, detail oriented Chemical Engineer seeking fulltime Process Engineering role where I can use my skills to improve processes and reduce cost.

## EXPERIENCE

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<b>Summer Intern</b>	<b>ICES, University of Texas, Austin, TX.</b>	<b>06/2017- 08/2017</b>
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Computational Simulation and Visualization of Nanoscale Sintering

- Modelled nanoscale sintering using the phase field model.
- Developed a computational simulation of nanoscale sintering phenomena of metallic nanoparticles for use in novel micro selective laser sintering additive manufacturing applications.
- Used the first principles to develop a parameter search algorithm for obtaining feasible simulation parameters.
- Developed an algorithm to process and create a visualization of the different phases of nanoscale sintering.

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<b>Project Manager</b>	<b>Bug Tech, Tampa FL.</b>	<b>02/2017 – 04/2017</b>
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Self-Heating Bug Repellent System

- Awarded the Outstanding Product Design Award.
- Designed a product with 47% DCFRR on 5.3M initial investment over 5.4 years.
- Assigned team member task and managed meetings.
- Coordinated a team of 4 engineers.

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<b>Undergraduate Research</b>	<b>University of South Florida, Tampa FL.</b>	<b>06/2016 – 01/2017</b>
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Glaucoma Treatment

- Trained rats to identify a target stimulus using operant conditioning.
- Acquired vision data.
- Modeled rats' contrast sensitivity.
- Identified the vision baseline for rats with normal vision and rats with glaucoma.

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<b>Tutor &amp; Private Tutor</b>	<b>Pasco-Hernando State College</b>	<b>09/2014 – 08/2015</b>
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- Facilitated student's understanding of fundamental mathematical and scientific concepts.
- Improved student's grades.

Subjects:

- Chemistry (Organic and General).
- Calculus I, II, & III.
- Physics.

Projects:

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| • <b>Industrial Digester Control System:</b> Used control principles to design a feedback and feedforward control system designed to keep an industrial digester within environmental specification. | <b>04/2017 – 05/2017</b> |
| • <b>Chemical Vapor Deposition reactor design:</b> Used reaction engineering principles to design a chemical vapor deposition reactor that has a theoretical yield of 75%.                           | <b>08/2016 – 12/2016</b> |
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## EDUCATION

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<b>B.S in Chemical Engineering</b>	<b>University of South Florida, Tampa FL.</b>	<b>December 8<sup>th</sup> 2017</b>
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Overall GPA: **3.75/4.0**; Major GPA: **3.67/4.0**

## PROFESSIONAL ASSOCIATION

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- Tau Beta PI Engineering Honor Society
  - American Institute of Chemical Engineers
  - Institute of Electronic and Electrical Engineers

## TOOL SET

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- **Intermediate** proficiency: Arduino, SIMULINK, COMSOL, Photoshop CC, Autodesk Inventor, EPI suites, WAR Algorithm, C++, JavaScript, HTML/CSS.
  - **Advance** proficiency: Microsoft office suite, Aspen Plus, C, Python, C#, Java, MATLAB.