

# Chukwubuikem Ume-ugwa

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<https://cleverchuk.github.io>

## Qualifications Profile

Highly educated and qualified Chemical Engineer with special interest in Process Engineering.

- Knowledgeable in areas of chemical engineering, statistical analysis, risk analysis, and product development.
- Significant intelligence within heat exchanger networking, Arduino microcontrollers, equipment sizing, optimization, and computer programming, including Python, C/C++, Java, and C#.
- Hands-on experience in computational modelling and simulation, as well as rapid prototyping in Autodesk Inventor.
- Adept leader with team management capabilities, with knowledge of project management and research.

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## Education

**Bachelor of Science, Chemical Engineering** (December 2017)

University of South Florida, Tampa, FL

- Overall GPA: 3.75
- Major GPA: 3.67

### Associations

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

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## Professional Experience

ICES, University of Texas, Austin, TX

**Summer Intern**, June 2017 – August 2017

Worked and learned within computational simulation and visualization of nanoscale sintering, developing and modelling nanoscale sintering utilizing the phase field model. Utilized knowledge and education to develop a computational simulation and visualization of the diffusion mechanism that takes place during nanoscale sintering of metallic nanoparticles used in new micro selective laser sintering additive manufacturing applications.

- Developed a parameter search algorithm use to obtain feasible simulation parameters.

Bug Tech, Tampa, FL

**Project Manager**, February 2017 – April 2017

Spearheaded project efforts throughout the development of self-heating bug repellent system, overseeing and coordinating a team of 4 engineers, assigning tasks and organizing meetings.

- Earned Outstanding Product Design Award.
- Designed product with 47% DCFRR on 5.3M initial investment over 5.4 years.

University of South Florida, Tampa, FL

**Undergraduate Research**, June 2016 – January 2017

*Continued...*

Performed research involving glaucoma treatment with rats, training said rats to identify a target stimulus utilizing operant conditioning. Monitored rats, identifying vision baseline for those with normal vision and those with glaucoma and collecting data. Recorded contrast sensitivity.

Pasco-Hernando State College, New Port Richey, FL

**Tutor**, September 2014 – August 2015

Offered educational assistance to students within the understanding of fundamental mathematical and scientific concepts, administering exams and aiding students to improve grades. Monitored computers and resolved any technical issues.

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## Selected Projects

### Industrial Digester Control System

Designed a feedback and feedforward control system utilizing control principles to keep an industrial digester within environmental specification.

### Chemical Vapor Deposition Reactor Design

Designed and developed chemical vapor deposition reactor with a theoretical yield of 75% using reaction engineering principles.

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### Intermediate Proficiency

Arduino, SIMULINK, COMSOL, Photoshop CC, Autodesk Inventor, EPI Suites, WAR Algorithm, C++, JavaScript, HTLM/CSS

### Advance Proficiency

Microsoft Office Suite, Aspen Plus, C, Python, C#, Java, MATLAB