

# Thai Nghiem

**CURRENT ADDRESS**  
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## EDUCATION

**Bachelor of Science, Electrical and Computer Engineering**  
**Minor, Computer Science**

Expected December 2019

Rowan University, Glassboro, NJ

GPA 3.9 / 4.0 (top 3)

Tau Beta Pi - Engineering Honor Society

## WORK EXPERIENCE

**Full Stack Java Developer | American Water**

January 2019 - Present

*Camden, New Jersey*

- Develop a responsive Web application that automates water quality workers' daily tasks, which involve collecting and managing 6000 bacteria samples per month.
- Computerize reporting progress, scheduling routines, entering field results, monitoring sample status processes, which can save 4 to 8 hours of work per week per user.
- Extract, transform, validate, and distribute data from and to databases using PostgreSQL.
- Work closely with business leaders, designers, and other developers in a tightly knit, agile team.

**Hardware & Firmware Engineering Intern | Ellenby Technologies**

Summer 2018

*Woodbury Heights, New Jersey*

- Designed and built the Optical-Scanning Circuit Board for Ellenby's latest Rolled-Coin Dispensing Safe. Developed the firmware to support this board in C++.
- Improved rolled-coin recognition precision in color and diameter by 200% compared to the previous iteration, while reducing the production cost.
- Collected and analyzed scanning data using MATLAB to determine optimal scanning speed, light intensity, receiver gain, and board position.

**Software Engineering Intern | FPT Information System Corp.**

Summer 2017

*Hanoi, Vietnam*

- Interned in "Risk Management System" Program at FPT Group (No. 1 in the field of system integration, IT services, online advertising and distribution of technology products in Vietnam)
- Built a Student Management website using Servlet & JSP on Eclipse, and using MySQL for databases.
- Improved the User Interface of the Tax Revenue project, which made use of various Java frameworks (such as Struts 2 and ExtJS).

## PERSONAL & SCHOOL PROJECTS

**Augmented Reality App Development | Engineering Clinic Project**

September 2017–Present

*Rowan University | Glassboro, NJ (link to Conference Paper - <https://tinyurl.com/ydykwm2d>)*

- Materialized a patented technology (#9,626,568 USA), which reconstructs a 3-D object from a 2-D image, using image processing (filtering, transformation, feature extraction).
- Developed a user-friendly UI on MATLAB and C++ for this new technology.
- Ported the developed MATLAB code to C++, allowing access on Android devices.

**IEEE Competition - Third Place: Sumo Robotics Scratch**

Fall 2016

*Glassboro, NJ (link to Design Report - <https://tinyurl.com/y8fha2b8>)*

- Designed and built (using DipTrace) a Printed Circuit Board (PCB) that was used to support the MSP430 micro-controller to control the robot. Constructed and 3-D printed (using SolidWorks) the chassis and the shield of the robot.
- Contributed to implementing the code (in C) that decides the behaviors of the robot.

**Object-Oriented Application Design**

Fall 2016

*Hands-on Experience (GitHub link <https://github.com/nghiemthai1/Bike-Shop>)*

- Designed and coded, from scratch, a Bike Shop application that allows users to rent bike and accessories.
- Implemented polymorphic collections, interfaces, abstract classes, error handling methods and Java GUI.
- Documented the project using UML Diagram and Sequence Diagram.

## TECHNICAL SKILLS

**Software** - Java, JavaScript, MATLAB, C/C++, MySQL, CSS, HTML, Verilog HDL, LabVIEW, Python

**Hardware** - FPGAs, Micro-controllers, breadboards, Multi-meters, Oscilloscopes, Function Generator