

# Youngsik Yoon

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## Education

### Purdue University | Honors College

West Lafayette, Indiana

BACHELOR'S OF SCIENCE IN COMPUTER SCIENCE HONORS

Aug 2017 - May 2021 (Expected)

- GPA: 3.70/4.00
- Courses: Data Mining and Machine Learning, Systems Programming, Data Structures and Algorithms, Computer Architecture, Discrete Mathematics, Linear Algebra, Competitive Programming, Object-Oriented Programming, Intro to Statistics, Calculus (I, II, III)

## Experience

### ExxonMobil

Houston, Texas

SOFTWARE ENGINEERING INTERN

May 2019 - Aug 2019

- Assisting field engineers by building an iOS application to mobilize a .NET desktop project using Swift, Objective-C, and SQL.
- Increasing use cases for the application and saving 1 hour per usage which leads to a global average saving of \$480,000 per year.
- Engaging with clients to identify business features, build a user-centered application, and practice agile software development.

### Purdue University, Department of Computer Science

West Lafayette, Indiana

UNDERGRADUATE TEACHING ASSISTANT FOR DISCRETE MATHEMATICS

Jan 2019 - Present

- Assist department faculty with preparing and reviewing practice problems by crafting and covering course content.
- Facilitated discussion and solved problems to around 20 students in multiple 'Practice. Study. Observation.' sessions.
- Course topics included basic logic and mathematics language, proof techniques, algorithms, basic number theory, basic counting, discrete probability, trees, boolean algebra, combinatorial circuits, finite state machines, and context-free grammars and languages.

### Image Database Team, Continuous Analysis of Many CAMeras

West Lafayette, Indiana

UNDERGRADUATE RESEARCH ASSISTANT UNDER YUNG HSIANG LU

Jan 2019 - Present

- Design and assembled a storage system for real-time indexing of incoming surveillance streams and make it searchable.
- Constructed a command line interface, designed ER diagrams, setup the image-feature database, and ensured atomicity.
- Utilized MiniIO Object Storage Database for incoming images, Vitess MySQL Database for feature storage, and Python for the interface.

### Sandia National Laboratories

Albuquerque, NM

SOFTWARE DEVELOPER INTERN

May 2018 - Aug 2018

- Implemented a cluster-analysis model which grouped texts based on key terms or phrases through stemming and lemmatization using Natural Language Toolkit.
- Extracted training data from historical records to improve a K-means clustering algorithm by 6%.
- Created a data analysis and visualization web application tool on patent data using JavaScript, HTML, and Python.

## Projects

**Dollar for Dollar, VandyHacks V Hackathon** A user-driven Alexa skill which streamlines grocery shopping by helping customers buy items, keep track of current deals, and compare prices. Built with Dollar General item database and Alexa Skills.

**Sunshine, BoilerMake VI Hackathon** A user-driven Alexa skill and web application that suggests clothing based off of weather and user preference to different weather conditions. Built with MongoDB stitch, TensorFlow.js, DarkSky API, and Alexa Skills.

**Google Play Store App Data Analysis, Honors Project** A statistical analysis of the scraped Google Play app store data to find trends and patterns related to the market to help developers. Built with R and used ANOVA and Welch two-sample t-test for analysis.

**GeoTrash, EcoMake Hackathon** A community-driven web application tool that collects different recycle bin location points. Built with Tornado, a web server written in Python, and Leaflet, a JavaScript mapping application.

## Skills

**Languages** Java, C++, C, Python, JavaScript, SQL, Swift, bash, Kotlin

**Frameworks / Libraries** Spark, NodeJS, React, .NETCore, Cocoa

**Other Technologies** Android Studio, Firebase, Amazon Web Services (Lambda, DynamoDB, Alexa Skills), git

## Activities / Honors

2019	<b>Presenter</b> , Purdue Undergraduate Research Conference, Poster Symposium	West Lafayette, Indiana
2019	<b>Mentor</b> , MiniMake, Hackathon for Middle and High School Students	West Lafayette, Indiana
2018	<b>Sponsor Prize Winner</b> , VandyHacks V, Courtesy of Dollar General	Nashville, Tennessee
2018	<b>1st Place</b> , Sandia National Laboratories, TITANS Space Blimp Coding Challenge	Albuquerque, New Mexico