# Yeongeun Kim

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Highly analytical and dedicated professional with recent education and expertise in Machine Learning (ML), data analysis, image processing, and computer vision.

Possess in-depth knowledge and working understanding of various tools and programming languages, including MATLAB, Python, JAVA, C++, TCAD, PSPICE, SPICE, and R. Proven ability in establishing new (ML) models based on existing data and defining rapid prototyping of machine learning techniques. Demonstrated history of carrying-out several projects in image processing and computer vision during master's degree. Thrives in competitive and challenging markets and adapts to the ever-changing demands of Artificial Intelligence (AI) field.

Willing to relocate: Anywhere

# Work Experience

## **Machine Learning & Signal Processing Student**

University of Wisconsin - Madison, WI September 2020 to December 2021

Utilized MATLAB, C, C++, Java, R, and Python programming language for data analysis and various machine learning projects. Gained expertise in command-line scripting in the Linux environment. Processed large amounts of data during capstone project. Enhanced knowledge in sampling, probability, multivariate data analysis, and regression, and time series analysis for information and probabilistic theory.

#### **Undergraduate Research Assistant**

Hybrid Multi-Scale Materials and Device Lab, Incheon National University January 2018 to December 2019

A Study on Resistive Random Access Memory based on C-PVA doped with EGO

Created idealistic RRAM through manufacturing of insulator layer by adjusting

C-PVA and EGO ratio that consumes less electricity in small physical size and maintain resistance value after extending operation time and cycle while analyzing results of operation.

Utilized thermal evaporator in the shadow mask process to build top electrode.

Conducted cleaning process through ultrasonic waves (sonicator).

Plotted and analyzed graph by using Origin program.

Analyzed operation by applying voltage in top electrode by using probe station device

Fabrication and Simulation by Technology CAD on Thin Film Transistor

Analyzed and researched on stability of multilayered TMDC field-effect transistor by using TCAD simulation program.

Streamlined process with ultrasonic waves for transfer and baking process through hot plate UV process. Performed spin coating process via spin coater and soft coating process through usage of mask aligner. Processed thermal evaporation by utilizing thermal evaporator and lifting off used probe station for measurement.

Confirmed changes in voltage-current graph by altering components and structures of semiconductors by utilizing CAD simulation program from Silvaco Company.

### Education

# M.S. Electrical Engineering in Machine Learning & Signal Processing

University of Wisconsin - Madison, WI 2021

# **B.E.** in Electronics Engineering

Incheon National University 2020

## Skills

- · Machine Learning
- Computer Vision
- Data Analysis & Simulation
- Team Collaboration
- Image Processing & Enhancement
- ML Algorithm Implementation
- ML Model Training
- Logistic Regression Model
- Complex Issues Resolution MATLAB
- Python
- JAVA
- C++
- C
- TCAD
- R
- PSPICE
- SPICE
- Microsoft Office Suite
- Linux
- Google Colab
- Spark SQL
- JavaScript
- Signal Processing
- Al
- OpenCV
- PyTorch
- TensorFlow

- Deep learning
- Keras
- Pandas
- NumPy

## Languages

• English - Fluent

### Links

https://www.linkedin.com/in/yeongeun-kim-30285022a

### Awards

#### **Academic Awards**

Academic Honor (Highest Honor), Incheon National University

Excellence Award, The 4th Career Exploration Program - Early Taste Decision Program, Incheon National University

Academic Honor (Outstanding), Incheon National University

Device Leader Education Center (College Characterization Business in Capital Areas), Incheon National University

College Characterization Business Scholarship (Edison Scholars), Incheon National University Academic Honor (Good), Incheon National University

National Scholarship (Type I & II), Incheon National University

#### Assessments

## **Analyzing data — Highly Proficient**

January 2022

Interpreting and producing graphs, identifying trends, and drawing justifiable conclusions from data Full results: <u>Highly Proficient</u>

Indeed Assessments provides skills tests that are not indicative of a license or certification, or continued development in any professional field.

### **Publications**

## **Research Paper**

A study on Resistive Random Access Memory based on Cross Linked PVA doped with reduced Graphene Oxide

Bachelor's Thesis, Incheon National University, South Korea