

# Mintae Kim

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## RESEARCH INTERESTS

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Machine Learning, Computer Vision, Robotics, Generative Models,  
Scene Representation, Motion Planning, Partial Differential Equations

## EDUCATION

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Mar. 2019 - Feb. 2022 **KAIST** **Daejeon, Korea**

*B.S, Industrial and Systems Engineering*

- GPA of 3.47 / 4.3
- Individually designed major: Computer Science and Mathematical Science
- I was the only student who complete this degree program within three years
- Full scholarship

Mar. 2016 - Feb. 2019 **Daejeon Dongsin Science High School** **Seoul, Korea**

- Summa Cum Laude (Topper in Mathematics, Computer Science and Physics)

## RESEARCH EXPERIENCE

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Apr. 2022 - Present **Ados** **Seoul, Korea**

- Open Set Anomaly Detection for Action Recognition (with Samsung Display)
- LSTM Encoder-Decoder based Log Anomaly Detection (with Samsung Display)
- Score-based Generative Model for Data Synthetization (Government Project)
- Sensory Data Anomaly Detection via GAN
- Anomaly Detection of Solar Photovoltaic System and Inverter based on VAE

Dec. 2020 – Jun. 2021 **MISO Info Lab** **Seoul, Korea**

- Smart Crosswalk for Traffic Accident Prevention (Computer Vision)
- Real-time Personal Information Blurring in Traffic Video (Government Project)

## WORK EXPERIENCE

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Mar. 2022 - Present **RIMES Labs** **Seoul, Korea**

- Co-Founder and CTO
- Machine Learning and Back-end Developer
- Government support program for RIMES Art project (Acceptance rate 3.3%)

Apr. 2022 - Present **Ados** **Seoul, Korea**

- Senior Researcher
- Machine Learning Team Leader

Dec. 2021 - Mar. 2022 **TBUunicorn** **Seoul, Korea**

- Research Intern at Machine Learning Team

Dec. 2020 - Mar. 2021	<b>MISO Technologies</b> <ul style="list-style-type: none"> <li>• Lab Intern at Machine Learning Team</li> </ul>	<b>Seoul, Korea</b>
Aug. 2019 - Jun. 2022	<b>D&amp;B Edu Consulting</b> <ul style="list-style-type: none"> <li>• Co-Founder and CTO</li> <li>• Front-end and Back-end Developer</li> </ul>	<b>Seoul, Korea</b>

## PAPERS

Oct. 2022	<b>Open Set Action Anomaly Detection</b> Mintae Kim, Hyeongmin Moon <i>KSII Transactions on Internet and Information Systems (Submitted)</i>	
Jun. 2022	<b>Insider Threat Detection through Video and Log Anomaly Detection</b> Mintae Kim, Hyeongmin Moon, Jake Lee <i>Project paper with Samsung Display Security Department (Censored)</i>	
Dec. 2021	<b>FoodGAN: Food Image Generation using Deep Convolutional GAN</b> Mintae Kim <i>Final project thesis paper for IE481: Deep Generative Models, Multi Armed Bandit, and Bayesian Optimization class at KAIST</i>	

## INVITED AND CONTRIBUTED TALKS

Jun. 2022	<b>Korea Quantum Computing Corporate Association</b> <ul style="list-style-type: none"> <li>• Colloquium at Korea Institute of Science and Technology Information</li> <li>• Title: Introduction to Quantum Machine Learning</li> </ul>	<b>Seoul, Korea</b>
Mar. 2020	<b>Daejeon Dongsin Science High School</b> <ul style="list-style-type: none"> <li>• Computer Science Seminar for Freshmen</li> <li>• Title: Object Detection and Action Recognition</li> </ul>	<b>Daejeon, Korea</b>

## TEACHING

Mar. 2022 - Present	<b>Primestone Consulting</b> <ul style="list-style-type: none"> <li>• Taught Computer Science and Mathematics for IMO and IOI</li> <li>• Taught AP Computer Science and Mathematics for ages 16-18</li> </ul>	<b>Seoul, Korea</b>
Aug. 2019 - Jun. 2022	<b>D&amp;B Edu Consulting</b> <ul style="list-style-type: none"> <li>• Taught Computer Science and Mathematics for IMO and IOI</li> <li>• Taught Calculus, Differential Equations, Mathematical Statistics and Linear Algebra</li> <li>• Taught AP Computer Science and Mathematics for ages 16-18</li> </ul>	<b>Seoul, Korea</b>
Dec. 2019 - Feb. 2020	<b>KAIST</b> <ul style="list-style-type: none"> <li>• Teaching Assistant at Korean Mathematical Olympiad Winter School</li> </ul>	<b>Daejeon, Korea</b>

## VOLUNTEER EXPERIENCE

Mar. 2022 – Present	<b>RIMES EECS Camp for Gifted Students</b> <ul style="list-style-type: none"> <li>• <i>Topological Data Analysis</i> (Aug. 2022)</li> <li>• <i>Object Detection and Action Recognition</i> (Jul. 2022)</li> <li>• <i>Generative Models and Art Generation</i> (Jun. 2022)</li> <li>• <i>Ordinary Differential Equations</i> (May. 2022)</li> </ul>	<b>Seoul, Korea</b>
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- *Lagrangian Mechanics* (Apr. 2022)
- *Advanced Python Programming* (Mar. 2022)

Sep. 2019 - Sep. 2021    **KSCY**    **Seoul, Korea**

- *Introduction to Differential Geometry and Topology* at Winter Camp 2021
- *PDE101: How to Solve Partial Differential Equations* at Summer Camp 2021
- *Maxwell's Equations and PDEs* at Mathematics Session 2020
- *Introduction to Motion Planning* at Global Science and Engineering Session 2019

Feb. 2020 - Jan. 2020    **Community Child Care Center**    **Daejeon, Korea**

- Taught Mathematics for ages 14-16
- Basketball Team Coach

## **SKILLS & OTHERS**

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- Python, Java, C++, PyTorch, Tensorflow, Keras, Linux
- Javascript, HTML, CSS
- Both fluent in English and Korean
- Inaugural Member of Korea Quantum Computing Corporate Association
- Assistant Coach at KAIST Basketball Team