

So-Activity-1

Main Research Interest

Forest ecosystems provide many essential services such as climate regulation and carbon storage. However, they are endangered by ongoing resource exploitation and climate change. Forest management practices hold massive potential for reducing the atmospheric buildup of carbon dioxide but require an intensive assessment of their contribution to enhanced carbon sequestration. Unfortunately, traditional inventory-based forest monitoring practices are time, cost, and labour intensive and impractical at a national scale.

Digital twinning and *LiDAR*¹ can improve national-scale carbon monitoring by modeling the impact of forest management practices, but it is still new and requires research in integrating process models, state variables, and silvicultural interventions.

The main research interest of Kangyu So is to develop digital forest twins to monitor forest management practices used as nature-based climate solutions. Kangyu is interested in integrating process models and state variables with digital twin modeling to investigate its feasibility for forest ecosystem monitoring. His research will analyse relationships between carbon sequestration and stand parameters estimated from LiDAR, and model these relationships to investigate the impact of forest management interventions on carbon uptake in foliage and woody biomass.

Favourites

Favourite Music

1. Wild Flower - Park Hyo Shin (2016)
2. I Don't Love You - Urban Zakapa (2016)
3. Through the Night - IU (2017)
4. Like it - Yoon Jong Shin (2018)
5. TAIJI - CHANGMO (2021)

Favourite Equation

$$\sigma = \sqrt{\frac{\sum (x_i - \mu)^2}{N}}$$

Favourite Artists

¹Light and Detection Ranging

Name	Achievements
<i>Park Hyo Shin</i>	2002 KBS Music Awards Main Prize, 2002 Seoul Music Awards Main Prize
<i>Urban Zakapa</i>	31st Golden Disk Awards Digital Bonsang
<i>IU</i>	2012 Korean Music Awards Song of the Year, 2020 Mnet Asian Music Awards Best Female Artist
<i>Exo</i>	2013 KBS Song Festival Song of the Year, 2014 MAMA Awards Best Male Group
<i>Yoon Jong Shin</i>	2017 Gaon Chart Music Awards Popular Singer of the Year, 2017 Mnet Asian Music Awards Best Vocal Performance

A Chunk of Code

I chose to write a chunk of code that creates a box plot using data from PlantGrowth, a built-in R data set.

```
# Load the data set
data(PlantGrowth)

# View the data set
View(PlantGrowth)

# Install and load ggplot2
install.packages("ggplot2")
library("ggplot2")

# Create a box plot of the PlantGrowth data set comparing dry weight and treatment condition
box_plot <- ggplot(PlantGrowth, aes(x = group, y = weight, fill = group)) +
  geom_boxplot()
box_plot
```