**Proposal for Semester Project**

Patterns & Trends in Environmental Data / Computational Movement Analysis Geo 880 FS2021

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| **Stud 1 Gubelmann/ Yves /** 14522007  **Stud 1 Wildhaber / Tobias /** 15555063  **tbd** | Which option do you choose:   * Option A: Wild boar data   X Find nesting sites   * Alternative movement patterns * Wildschweinschreck * Option B: Free choice of topic |

**Abstract** (50-60 words)

Yves

What are the **research questions** of your project?

(50-60 words)

Tobias

Wie lassen sich Nesting Sites mit den Daten XY modellieren?

Lassen sich von Wildschweinen häufig besuchte Orte in den Daten XY erkennen?

Können Aufenthaltsorte klar als Kesseln oder Suhlen definiert werden?

Which **results/products** do you expect, anticipate?

Tobias

Rastered heatmap with nesting sites, differentiated by wallows and nests

Can be filtered by seasons and animalID, context of land coverage (Arealstatistik)

…

What **data** will you use? Will you require additional context data? Where do you get this data from? Do you already have all the data?

Tobias

Wildschwein data (moodle), Arealstatistik und andere Daten von Swisstopo (LIDAR-Daten)

Vegetation Model (Forest Inventory) 🡪 digital surface models DSM and digital terrain model by swisstopo

Feldaufnahmen / Kulturtypen

Which **analytical concepts** will you use? What conceptual movement spaces and respective modelling approaches of trajectories will you be using? What additional spatial analysis methods will you be using?

Yves

CAMA relation matrix

Context with raster data

Field data

Which R **concepts, functions, packages** will you mainly use. What additional spatial analysis **methods** will you be using?

Yves

Tidyverse, TERRA, tmap,

Segmentation to define stasis and movement

Convex hull for home range

Contextualizing

**Risk analysis**: What could be the biggest challenges/problems you might face? What is your plan B?

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Findig clear criteria (in literature) to define and identify nests and wallows

Handling raster data in plots

Plan B: no differentiation between nests and wallows, just identifying häufige Aufenthaltsorte

Which **questions** would you like to discuss at the coaching session?

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Welche Methodik ist aus Sicht Tutor sinnvoller für unsere Fragestellung?