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Michelle de Groot

MSc Bioinformatics

Driven and ambitious with a strong research background in genetics, committed to unraveling the mysteries of the human genome. With a positive mindset, critical thinking, and an inquisitive nature, I continuously seek opportunities for personal growth and innovative solutions. Combining my technical skills with a passion for bioinformatics, I am excited to contribute to cutting-edge research and make a profound impact in the medical field.

EXPERIENCES

April 2023 – October 2023
SEX-SPECIFIC BIOMARKERS OF AGING IN RESPONSE TO CHILDHOOD STRESS – PSYCHIATRY DEPARTMENT, BRAIN CENTER, UMC UTRECHT
Analyzed genetic and epigenetic data and used PC-corrected epigenetic clocks for accurate biological age estimation. The goal is to identify biomarkers that explain sex differences in aging in response to childhood trauma.

February 2022 – January 2023
META-ANALYSIS OF NEARLY 10.000 ALS PATIENTS SHOWS ASSOCIATION OF UNC13A WITH SURVIVAL – NEUROLOGY DEPARTMENT, BRAIN CENTER, UMC UTRECHT
Performed a large-scale GWAS that confirmed association of a disease modifying ALS gene that also demonstrated potential for discovering new associations by increasing the sample size.

February 2021 – July 2021
SECURING THE RVSD CURATION IN A CONTAINER AND PROFILING THE EFFECTS - CENTER FOR MATHEMATICAL SCIENCES MSD - OSS
Collaborated with international colleagues to enhance viral detection pipeline. Improved efficiency using Docker and conducted statistical analysis on the curation process.

September 2019 – February 2020
REPEAT EXPANSION DETECTION IN WES DATA – HUMAN GENETICS DEPARTMENT, RADBOUD UMC NIJMEGEN
Implemented STR calling in WES pipeline, improving genetic analysis. Developed and integrated software using Java, see [1].

EDUCATION

September 2021 – January 2024
MASTER BIOINFORMATICS AND BIOCOMPLEXITY – UTRECHT UNIVERSITY -UTRECHT
Courses: Advanced R, Cancer Genomics, Structural Bioinformatics and Modelling, Basic Machine Learning

September 2017 – Augustus 2021
BACHELOR BIOINFORMATICS - HAN -NIJMEGEN
2018: Achieved cum laude propaedeutic phase

September 2020 – February 2021
MINOR MEDICAL BIOLOGY – RADBOUD UNIVERSITY -NIJMEGEN
Courses: Biology and Society, History of Biology, Molecular Principles of Development, Genomics for Health and Environment and Infectious Diseases

SKILLS

- Genome-Wide Association Studies (GWAS)
- NGS Bioinformatics pipeline
- Large-scale data analysis
- FAIR data management
- Strong communication
- Adaptability

SOFTWARE SKILLS

- Working on High-Performance Computing (HPC) platforms
- R
- Python
- Bash
- Git
- Java
- SQL
- Docker

OTHER ACTIVITIES

MAY 2022 – NOW: JR PROCESS MINING CONSULTANT – DATICX CAPELLE A/D IJSSEL

Data- and process mining to track down bottlenecks and translate these problems to process optimization.

2023 – 2024:

Secretary on the board of the student korfbal association in Utrecht

2019 – 2023:

In these years I have been part of several committees of two different student korfbal associations.

1. van der Sanden., et al. (2021). DOI: 10.1038/s41436-021-01174-1