



Comenius University in Bratislava  
Faculty of Mathematics, Physics and Informatics

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## THESIS ASSIGNMENT

**Name and Surname:** Bc. Adrián Goga  
**Study programme:** Computer Science (Single degree study, master II. deg., full time form)  
**Field of Study:** Computer Science  
**Type of Thesis:** Diploma Thesis  
**Language of Thesis:** English  
**Secondary language:** Slovak

**Title:** Identification of Barcodes in Nanopore Data

**Annotation:** In sequencing experiments, biologists often attach known or random barcodes at the start of the sequences. The basic task is to bin resulting sequences based on these barcodes. This is an extremely challenging task in nanopore data due to high error rate. When errors occur within the barcodes, the sequences can no longer be binned based on exact match of barcodes. The goal of this thesis is to develop methods that directly use the raw signal from nanopore sequencing to overcome these issues.

**Supervisor:** doc. Mgr. Tomáš Vinař, PhD.  
**Consultant:** doc. Mgr. Bronislava Brejová, PhD.  
**Department:** FMFI.KAI - Department of Applied Informatics  
**Head of department:** prof. Ing. Igor Farkaš, Dr.

**Assigned:** 06.11.2018

**Approved:** 06.11.2018  
prof. RNDr. Rastislav Kráľovič, PhD.  
Guarantor of Study Programme

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Student

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Supervisor