
Comenius University in Bratislava
Faculty of Mathematics, Physics and Informatics

# THESIS ASSIGNMENT

| | |
|---|---|
| **Name and Surname:** | Bc. Emanuel Tesař |
| **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:** Efficient and Effective Dynamic Time Warping

**Annotation:** Dynamic time warping (DTW), a method from speech processing, is often used to align nanopore signals to sequences. However, the standard formulation of the problem does not capture properly important properties of underlying data, which results in artifacts in alignments. The goal of this thesis is to study various reformulations of the problem and extend the basic algorithm to a practical tool for aligning nanopore signals to sequences.

| | |
|---|---|
| **Supervisor:** | doc. Mgr. Tomáš Vinař, PhD. |
| **Department:** | FMFI.KAI - Department of Applied Informatics |
| **Head of department:** | prof. Ing. Igor Farkaš, Dr. |
| **Assigned:** | 30.10.2019 |

**Approved:** 21.11.2019 prof. RNDr. Rastislav Kráľovič, PhD.
Guarantor of Study Programme

.....
Student

.....
Supervisor