Computational Thinking and Data Science

• CT now widespread in K-12 education
  • Often data analytics is mentioned in connection with CT
  • However, most CT efforts focus on programming
    • Often in an imperative style – eg. Scratch or Python
    • Often focussed on robots or on screen simulations
  • Data analytics usually done declaratively
    • Spreadsheets, R, SQL, Scala, Spark/Hadoop, tensorflow
  • Thus there is a need for bridging the gap between imperative and declarative programming

• Aim of this project is to develop a more declarative approach to CT
• Starting point
  • Work done in the DFF project Popular Parallel Programming (P3)
    • extending the OpenSource spreadsheet FunCalc
  • 1st semester of DV – data analytics with spreadsheets (and Python)
  • 9th semester of DV – technologies for DV

• Work started 1.9.2021
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