Machine Learning For Intracranial Tumor Treating Field Model

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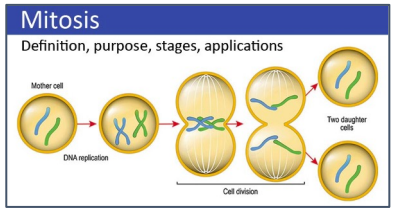
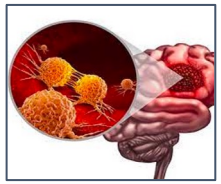
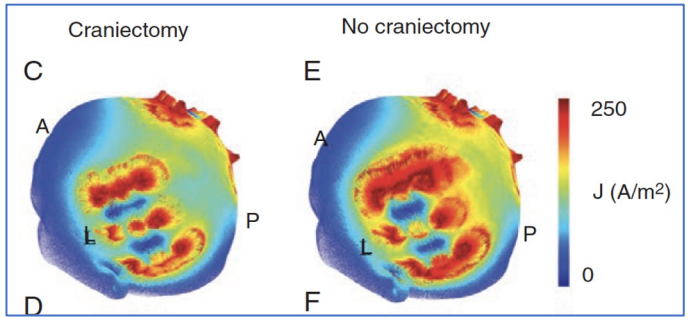
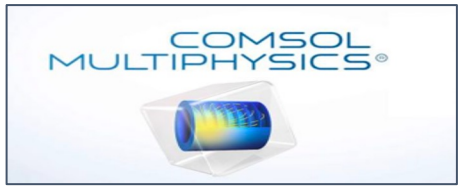
Motivation

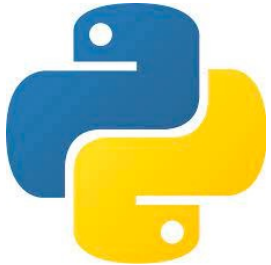


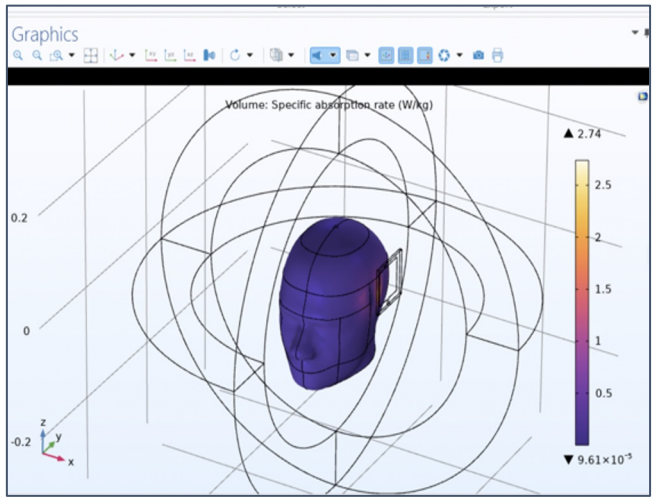




Method







Plan

- ❑ Goal: TTF model that can be surgically implanted inside the skull
- ❑ Key variables to change: electrode shape, location, amount of current
- ❑ Key variables to track:
  - electric field strength
  - electric field directionality
  - Specific Absorption Rate (SAR)
  - thermal effects
- ❑ Develop simple model in COMSOL to test variable simulation and tracking
- ❑ Increase model complexity based on physics values for materials
- ❑ Use machine learning to optimize the location and field strength based on the listed parameters

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