

## Popular science summary of the PhD thesis

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Title of the PhD thesis Social Engagement at Scale

PhD school/Department DTU Compute

### Science summary

\* Please give a short popular summary in Danish or English (approximately half a page) suited for the publication of the title, main content, results and innovations of the PhD thesis also including prospective utilizations hereof. The summary should be written for the general public interested in science and technology:

This project examines the dynamics of human attention online, in the times where so much of it is aggregated and commoditized by the social networks. The digital townhalls of Twitter, Facebook and Instagram track our collective attention via an increasingly diverse set of engagement metrics. The era of social big data offers significant advancements in data collection, storage, and analysis techniques, creating new opportunities for researchers to achieve high relevance and impact. Extracting knowledge from social big data, however, remains extremely difficult. Microsoft and DTU Compute join forces to deliver models of new understanding, via scientific avenues and Microsoft cloud services. The models of virality, engagement and popularity are the first to achieve strong ranking performance in a robust and explainable way. The compound engagement model, in particular, is the first to explain half of the variance with features available early, and to offer strong ranking performance simultaneously. The models are immediately applicable to social media monitoring, influencer identification, campaign engagement forecasting, and curating user feeds. The proposed data collection and analysis framework positioned this project among the largest studies on social media to date. The proposed model operationalization framework enabled Microsoft customers to respond to pre-viral content, including support request, before anyone else.

Please email the summary to the PhD secretary at the department