Understanding the Evolution of AI through the Lens of Authorship Verification

Jun Jang, Senior, Oxford High School, Oxford, MS, USA
Bo Wang, Assistant Professor, The University of Mississippi, University, MS, USA
Thai Le, Assistant Professor, Indiana University, Bloomington, IN, USA

Target Audience: General Public, including High School Students

Expected Watch Time: 15 minutes

Brief Description:

With the availability of large language models (LLMs), determining whether a piece of writing was truly authored by a person, instead of being generated or copied, has become more important than ever. This video introduces authorship verification (AV), the task of deciding whether two pieces of writing were written by the same person, and explores the challenges involved in solving AV using various artificial intelligence (AI) technologies.

Narrated by a high school student, the video uses AV as a lens to walk through the evolution of AI, from traditional machine learning with handcrafted features, to deep learning, to modern large language models (LLMs), and finally to emerging multi-agent AI systems. Along the way, the video discusses the strengths and limitations of each method, and how LLMs offer a new, flexible approach to solving AV using in-context learning and self-correction.

The goal of this video is to give the audience a chance to understand the development and key concepts behind the evolution of AI, and help them see the pros and cons of applying each approach to AV. This way, the targeted general audience may have a better chance of understanding how different AI technologies work and where they fall short. This may help build greater public trust in AI technologies, especially as AI is often seen as a black box.