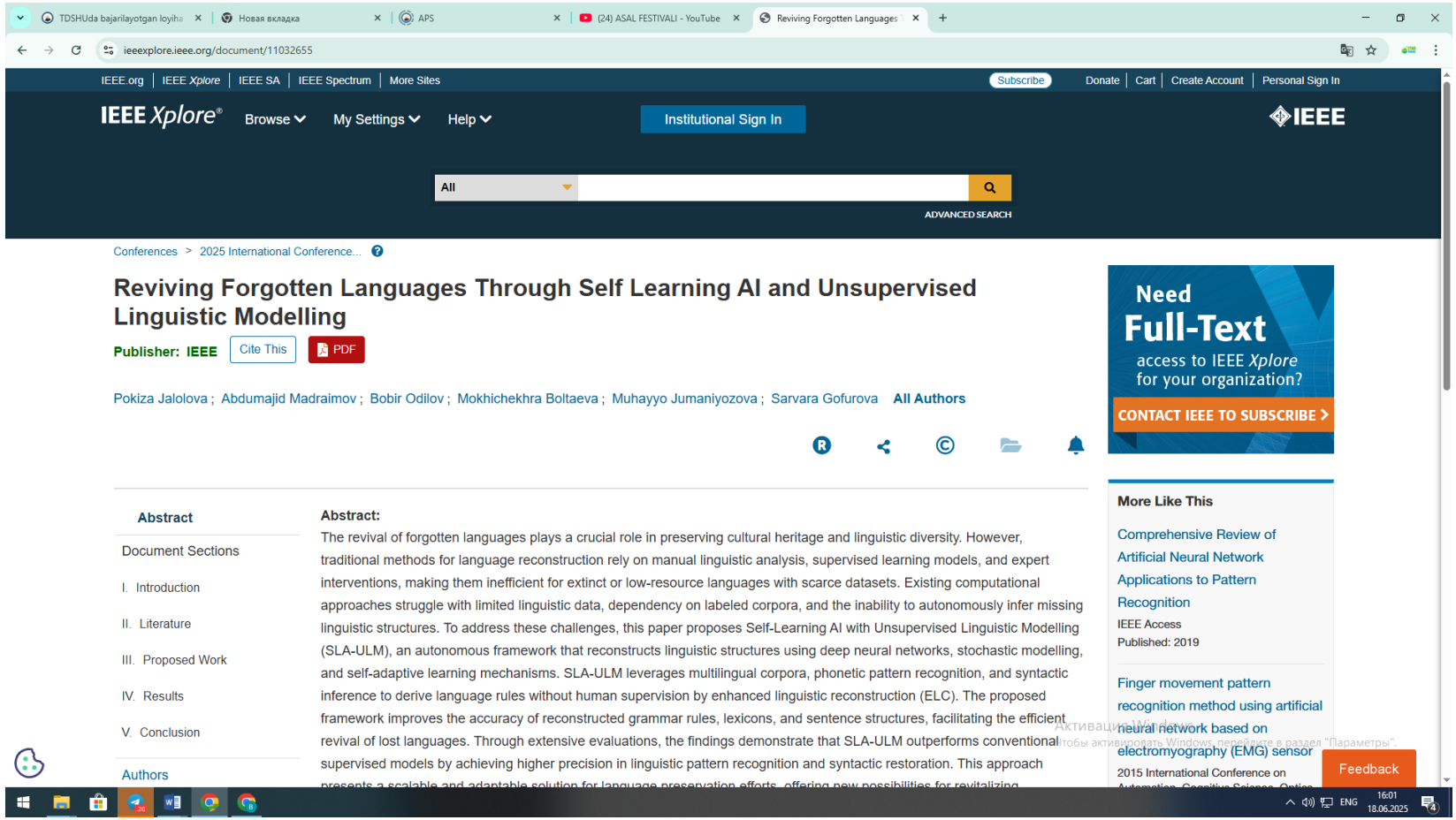
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Abstract
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V. Conclusion
Authors
Abstract:
The revival of forgotten languages plays a crucial role in preserving cultural heritage and linguistic diversity. However, traditional methods for language reconstruction rely on manual linguistic analysis, supervised learning models, and expert interventions, making them inefficient for extinct or low-resource languages with scarce datasets. Existing computational approaches struggle with limited linguistic data, dependency on labeled corpora, and the inability to autonomously infer missing linguistic structures. To address these challenges, this paper proposes Self-Learning AI with Unsupervised Linguistic Modelling (SLA-ULM), an autonomous framework that reconstructs linguistic structures using deep neural networks, stochastic modelling, and self-adaptive learning mechanisms. SLA-ULM leverages multilingual corpora, phonetic pattern recognition, and syntactic inference to derive language rules without human supervision by enhanced linguistic reconstruction (ELC). The proposed framework improves the accuracy of reconstructed grammar rules, lexicons, and sentence structures, facilitating the efficient revival of lost languages. Through extensive evaluations, the findings demonstrate that SLA-ULM outperforms conventional supervised models by achieving higher precision in linguistic pattern recognition and syntactic restoration. This approach
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I. Introduction
Every human being shapes their culture, past, and perception of self by their language [1]. Out of colonialism, globalization, and social changes, numerous languages have been extinguished [2]. Apart from its own body of specific knowledge, cultural practices, and linguistic diversity, a language dies extinct [3]. Reviving conventional languages depends on archival materials and specialized linguists; so, initiatives in this regard are labor-intensive as well resource-intensive [4]. Lack of enough data for numerous threatened or extinct languages makes reconstruction of them much more difficult [18]. Development in artificial intelligence has opened a new possibility for automated language revival [6]. Models driven by artificial intelligence can evaluate language patterns, fill in a[illegible]mmatical structures [7]. Most current artificial intelligence techniques, regrettably, depend on supervised learning, and these typically lacks the large annotated datasets needed by extinct languages [8]. One proposed solution for these problems is combining self-learning artificial intelligence with unsupervised language modelling [9]. By allowing autonomous learning from readily available multilingual data, this method helps to lower the necessity for human engagement [19].