**FORM-5**

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| **Bálint Kovács** | **kovacs.balint.kovacs@gmail.com** | **AiFusion: A Collaborative AI Testing Platform and the Emergence of AI Self-Criticism** | **Kodolányi János University, Computer Science Operational Engineering Bachelor’s Degree, Budapest, Hungary** | **+36202133210** | **0009-0006-2000-8212** |
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*\* Submit your abstract in the same file as Form-5.*

AiFusion: A Collaborative AI Testing Platform and the Emergence of AI Self-Criticism

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**Abstract**

The AiFusion project was developed to explore collaborative intelligence among multiple AI systems by gathering and comparing their answers. The platform implements various testing methods, including the "three answers, one judge" approach, where three AI models answer a question and a fourth AI, the Judge, selects the most correct answer based on the original question.

Tests were conducted under two conditions: anonymous mode (the Judge does not know which answer was its own) and identified mode (the Judge is informed which answer it produced). Throughout the experiments, the Judge AI consistently demonstrated self-critical behavior: even when its own earlier answer was wrong, it could recognize the better alternative provided by another AI without showing bias.

Moreover, the Judge's selections were often more accurate than any individual base answer, suggesting that under certain conditions, AI systems are capable of objective self-evaluation. These findings open new possibilities for improving AI reliability and decision-making quality through self-assessment processes.

The AiFusion platform is currently under development, with ongoing expansion to larger datasets and additional AI models. Future research will explore how this self-critical capability could be applied in areas like education, diagnostics, and collaborative decision-making.

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**Keywords:** artificial intelligence, AI collaboration, AI evaluation, bias detection, self-critical AI, decision-making reliability