

## **ABSTRACT**

### **THE BACKEND DESIGN OF ANDROID-BASED ITTPIZEN APPLICATION USING KTOR FRAMEWORK (Case study of IT Purwokerto Civitas)**

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*The development of information technology is currently taking place rapidly in Indonesia in line with people's demands for convenience and efficiency. It is in line with the development of mobile technology which has its main function as a communication tool. Telkom Institute of Technology Purwokerto is a good university governance institute in Central Java that has expertise in developing science based on information technology. To support the program, information dissemination and communication activities use websites and social media applications. However, users still have problems in selecting information according to the desired category and media to be able to connect with fellow civitas on the platform used by the institution, it was stated through a questionnaire distributed to 60 respondents consisting of 30 students, 10 lecturers, 15 alumni of the Software Engineering study program and 5 staff. Therefore, information technology can be updated so that the effectiveness in the use of media can increase so that users can use the platform by developing Android-based applications. Based on the existing problems, this study aims to build a Backend on the ITTPizen application using the Ktor framework. This research was developed using the Scrum method which includes the stages of Product Backlog, Sprint Planning, Sprint Backlog, Sprint, Sprint Review, and Sprint Retrospective. And using BlackBox Testing and Unit Testing to ensure the application runs well. The test results were 100% with 29 Test Cases with Blackbox Testing and for Unit Testing testing the results were 100% with 85 Test Cases. This research produces a Backend that is built using the Ktor framework which can be implemented on various platforms such as desktop, website and mobile.*

**Keywords:** *Android, API, Backend, Ktor, REST*