

Ellie Technologies

Project Proposal – Modern Authentication for a SaaS Application

1. Introduction

Ellie Technologies launched in 2019 an intuitive cloud-based data modeling and collaboration software Ellie (<http://www.ellie.ai/>) which is already used in over forty major companies and organizations in Finland and abroad. At the moment Ellie is integrating the software to other IT systems (e.g. data warehouse automation tools, data catalog tools, data vaults) so that data warehouses and big data platforms can be built and managed effectively.

2. Project goals

Currently Ellie supports only Email/Password and Microsoft's Azure AD for authentication. The goal of the project is to develop a modern OAuth2 based single sign on (SSO) authentication system and integrate it with Ellie. End users should be able to use the authentication method of their choice (e.g. Google, Okta, Microsoft) and log into Ellie in a managed and secure way. The authentication should include 2-step verification.

3. Technologies

Ellie runs currently in AWS. It's front-end is developed with React (JavaScript) and back-end with Node.js (JavaScript) and PostgreSQL. The project can develop the authentication system as an independent module, which runs in AWS. The module should be easily integrated with Ellie and that is why it is strongly recommended the team uses JavaScript for implementation. Otherwise, the project team can evaluate the best way to access Ellie and how to integrate the new authentication system with the Ellie SaaS environment.

4. Requirements for the students

The students should understand the basics of information security, cloud technologies and web programming. The project team should have both front-end and back-end development interest.

Difficulty level: moderate.

5. Legal Issues

Intellectual Property Rights (IPR):
The client gets all IPRs to the results.

Confidentiality:
The client will share some confidential information with the students.

6. Client

Ellie Technologies is a software start-up, which launched in 2019. The company office is based in Lauttasaari, Helsinki.

Jari "Jaffa" Jaanto is Ellie CTO and domain expert in all technologies used in the project. Jaffa has been the CTO of several software companies and start-ups in the past.

Juha Korpela is Ellie's Chief Product Officer. His previous position was Head of Azure Data Platform at UPM.

The Client provides as much time as the students need and can provide collaborative working space and access to necessary services and tools.

Client representative(s)

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7. Additional information

Everything is done in English.