

Candidate Profile Management System for an Open-Source Voting Advice Application

TL;DR: We're building a not-for-profit, open-source framework for voting advice applications (VAA) for use anywhere in the world. VAAs help voters find candidates and parties in elections. Your task is to design and develop the system for candidates to input their opinions.

1. Introduction

If you are Finn, you've probably used a 'vaalikone' or voting advice application (VAA) before. If you haven't, here's a brief intro:

i VAAs are [web apps](#) that help voters choose a candidate or a party in elections.

They usually take the form of questionnaires where the voter answers roughly 30 statements about political issues, such as '*Student benefits should be tied to an inflation index*'. After this the voter is given a list of the candidates that best agree with their views on these questions.

VAAs have a big impact on the results of elections. All of them, however, use closed-source software and even their recommendation algorithms are rarely disclosed. It's easy to see why this is not a good thing, and that's why we started the OpenVAA project in Jan 2023 to build an open-source framework for VAAs for use in any country and any kind of election.

The users of the library will be the publishers of VAAs, such as media outlets or NGOs. The users of the actual VAAs are, of course, the voters – but the interface for candidates is an equally crucial part of the system. That's where you come in!

Your team will build a web app for candidates to input their opinions and other data. This includes designing the UX and building the web app and backend. The app will build on the design system, UI components and backend of the web app for voters, the beta of which will be ready when the work starts. Special care will be taken to make the system fully localizable, accessible and well documented.

You will learn about working in a high-standards, open-source project, using cutting-edge open-source tech for building a full-stack web app. – And you will be contributing to democracy!

2. Project goals

The project will result in a fully-functional web app for candidates to input their opinions and personal data. The central features of the app are:

- Secure login (optionally with OAuth and Finnish bank login)
- Editing basic personal details
- Entering opinions to political statements
- Preview of profile (using voter app UI components)

The main considerations in the implementation are:

- Ease of use and frictionless UX both on mobile and desktop
- Accessibility (both cognitive and technical)
- Localizability
- Information security
- Modularity

3. Technologies

The following tech is currently used in the project.

- Languages: TypeScript • HTML • CSS • JSON
- Frontend: [Svelte](#) • DaisyUI/Tailwind
- Backend: [Sveltekit](#)/Node.js • [Strapi](#)/Postgres
- CI/CD: Docker • Husky • Vitest • GitHub Actions
- Design: Figma
- Collaboration: Slack • Google Docs

The team will provide support for the tech used.

4. Requirements for the students

Prior experience of the tech stack or VAAs is not necessary, but some familiarity with TypeScript will be helpful for developers. Svelte and Sveltekit, for example, are easy to pick up from tutorials.

The technical difficulty of the project is easy to moderate. Some complexity is introduced by modularity requirements and accessibility considerations.

The working language is English.

5. Legal issues

Intellectual Property Rights (IPR): The IPRs of the Results shall be governed according to the principles stated in an open source software license (MIT).

Confidentiality: The client will not share any confidential information with the students. The project and the governance of the OpenVAA organization is fully transparent.

6. Client

[OpenVAA](#) is a Finnish non-profit. The project is funded by the Finnish innovation fund Sitra and its sister research project by the Kone Foundation. The goals of the 2023–2025 project include:

- Making VAAs transparent
- Allowing publishing of VAAs in any country with little cost
- Encouraging VAA innovations, which have thus far been few and far between.

We will provide the necessary cloud infrastructure for development but do not have offices. We will organise one or more get-togethers for the team with free pizza or other equally palatable dishes.

Client representatives

Kalle, the Product Owner, is a developer–designer and entrepreneur with extensive experience from UX and graphic design. He has allotted 4–8 weekly hours for this project and will be very flexibly available.

Jhosimar, Technical Specialist, is a senior consultant/software engineer with experience in frontend , backend software development, and database management.. He has been working mainly on the development of frontend components and Database design.

Johanna, Technical Specialist, is a consultant and full-stack developer with experience in especially back-end development, TypeScript, C# and Python. She has especially worked with setting up project infrastructure, cloud environments and DevOps for the project and can help with all kinds of technical questions.

In addition to the named representatives, the team includes developers with other specialties and social scientists. We also collaborate with organisations promoting accessibility, open data and political participation.

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