

ImpactCV - Create Resumes That Make an Impact

Objective

ImpactCV is a simplified version of resume builders inspired by Enhancv and FlowCV, covering the following key features:

1. **On-canvas Editing** – Section-based editing inside the resume itself
2. **Design Customization** – Change colors, fonts, and styles
3. **Template Switching** – Ability to change templates dynamically
4. **Undo–Redo Stack** – For better user experience
5. **PDF Download** – Text-based, not image snapshots
6. **Reordering Sections** – Drag-and-drop functionality
7. **Public Sharing** – Generate a shareable link

Components Implemented

- **Resume Sections** – With full customizability
- **Templates** – Multiple template designs
- **Design & Font Styling** – Consistent, reusable, and scalable
- **Schema Design** – Efficient schema for data management
- **UI Polishing** – Micro-interactions, attention to UX consistency

Overview

ImpactCV is a modern, intuitive, and user-friendly web application designed to empower you to create professional and **impactful** resumes (CVs) with ease. Whether you're just starting your career or looking to make a change, ImpactCV provides the tools and flexibility you need to showcase your skills and experience effectively.

Forget tedious formatting and generic templates. ImpactCV offers a streamlined experience with real-time previews, customizable themes, and even AI-powered job tailoring to optimize your resume for both recruiters and Applicant Tracking Systems (ATS) to help you easily land your dream role.

Key Features

Intuitive Interface

- **Real-Time Preview:** Instantly visualize changes.
- **Drag-and-Drop Sections:** Customize your CV layout effortlessly.
- **Editable Section Titles:** Personalize headings to match your unique style.

Comprehensive Configuration

- **Basic Information:** Name, role, location, contact details, and social links.
- **Professional Summary:** Craft compelling professional summaries.
- **Experience & Education:** Clearly structure professional history and educational background.
- **Skills & Projects:** Highlight expertise and showcase impactful projects.

AI-Powered Job Tailoring

- **"Tailor for Job Description" Button:** Let Gemini AI automatically optimize your CV content based on specific job roles, ensuring maximum compatibility with ATS and increased recruiter visibility.

Beautiful & Distinctive Themes

- Choose from **20 unique themes** including Basic, Casual, Professional, Creative, Modern, Business, and many more, each transforming your CV into a visually compelling document.

Photo Integration

- Optional profile photo upload feature dynamically adjusts your CV layout.

Import & Export Options

- JSON Import/Export:** Quickly import or export your CV configuration.
- HTML Export:** Self-contained HTML file ready to host or share.
- PDF Export:** Simple, high-quality print or PDF generation.

Technologies Used

Frontend

- React** - UI library for building component-based interfaces
- TypeScript** - For type-safe code
- Vite** - Fast build tool and development server
- Tailwind CSS** - Utility-first CSS framework
- Radix UI** - Unstyled, accessible UI components
- Lucide React** - Icon library
- React-Quill** - Rich text editor
- UUID** - For generating unique identifiers
- Sonner** - Toast notifications
- React-Resizable-Panels** - For resizable UI components

Backend

- Express** - Node.js web application framework
- PostgreSQL** - Relational database
- Multer** - For file uploads
- CORS** - Cross-Origin Resource Sharing middleware
- dotenv** - Environment variable management

Development Tools

- ESLint** - Code linting
- TypeScript-ESLint** - TypeScript integration for ESLint
- SWC** - Fast JavaScript/TypeScript compiler

Installation & Setup

Prerequisites

- Node.js (v18 or higher)
- npm or yarn
- PostgreSQL database

Step 1: Clone the Repository

```
git clone https://github.com/yourusername/ImpactCV.git  
cd ImpactCV
```

Step 2: Install Dependencies

```
npm install
```

Step 3: Configure Environment Variables

Create a `.env` file in the root directory with the following variables:

```
DB_USER=postgres
DB_HOST=localhost
DB_NAME=resumedb
DB_PASSWORD=your_password
DB_PORT=5432
PORT=3001
```

Step 4: Set Up the Database

First, create a PostgreSQL database named `resumedb`, then run:

```
cd server
node setup-db.js
```

Step 5: Start the Backend Server

```
cd server
node server.js
```

Step 6: Start the Frontend Application

In a new terminal window:

```
npm run dev
```

The application will be available at `http://localhost:3001`

Usage Guide

Creating a New Resume

1. Start with Basic Information

- Enter your name, job title, contact information, and optional profile photo
- Add social media links and personal website URLs

2. Add and Configure Sections

- Click the "+" button in the sidebar to add new sections
- Available sections include: Summary, Experience, Education, Skills, Projects, Languages, Interests, and Custom sections

- Each section can be customized with specific fields relevant to that section type

3. Customize Your Design

- Select from 20+ themes in the Theme Selector
- Adjust spacing, font sizes, and colors to match your preferences
- Toggle visibility of section elements (dates, icons, etc.)

4. Reorder Content

- Drag and drop sections to change their order
- Reorder items within sections using the arrow buttons

5. Tailor for Job Applications

- Use the "Tailor CV" feature to optimize your resume for specific job descriptions
- The AI will suggest content improvements to match job requirements

Exporting Your Resume

1. Download as PDF

- Click the "Download" button in the top navigation
- Select PDF format and desired paper size (A4, Letter, etc.)
- Choose whether to include your photo

2. Share Online

- Generate a shareable link to your resume
- Set privacy options and expiration date for the link

3. Save Your Progress

- Your work is automatically saved in the browser
- Export your resume data as JSON for backup

🔌 API Documentation

The ImpactCV backend provides the following API endpoints:

Resume Management

GET /api/resumes

- Returns a list of all resumes for the authenticated user
- Response: Array of resume objects

GET /api/resumes/:id

- Returns a specific resume by ID
- Response: Single resume object

POST /api/resumes

- Creates a new resume
- Request body: Resume data object

- Response: Created resume object with ID

```
PUT /api/resumes/:id
```

- Updates an existing resume
- Request body: Updated resume data
- Response: Updated resume object

```
DELETE /api/resumes/:id
```

- Deletes a resume
- Response: Success message

File Upload

```
POST /api/upload
```

- Uploads a profile photo
- Request: Form data with 'photo' field
- Response: URL to the uploaded file

PDF Generation

```
POST /api/generate-pdf
```

- Generates a PDF from resume data
- Request body: Resume data and formatting options
- Response: URL to download the generated PDF

System Architecture

Overview

ImpactCV follows a client-server architecture with a React frontend and Express.js backend:



Frontend Architecture

The frontend is built with React and TypeScript, organized into the following structure:

- **Components:** Reusable UI components
 - **Sections:** Resume section components (Experience, Education, etc.)
 - **UI:** Basic UI elements (buttons, inputs, etc.)
- **Hooks:** Custom React hooks for state management
- **Lib:** Utility functions, types, and API clients

Backend Architecture

The backend is built with Express.js and provides:

- **API Routes:** RESTful endpoints for resume management
- **Database Integration:** PostgreSQL connection and queries
- **File Storage:** Handling uploads and serving static files
- **PDF Generation:** Converting resume data to downloadable PDFs

Data Flow

1. User interacts with the React UI
2. Frontend makes API calls to the Express backend
3. Backend processes requests and interacts with the PostgreSQL database
4. Results are returned to the frontend for display
5. For exports, the backend generates files and provides download links

Evaluation Criteria

Technical Assessment

1. **Code Quality:** Clean, maintainable, well-documented code
2. **Architecture:** Scalable system design and component structure
3. **Performance:** Efficient queries, optimized rendering, fast load times
4. **Security:** Proper authentication, data validation, secure practices

Feature Implementation

1. **Functionality:** Working features as per requirements
2. **User Experience:** Intuitive interface and smooth interactions
3. **Edge Cases:** Proper error handling and validation
4. **Responsiveness:** Mobile and desktop compatibility

Bonus Points

- **Innovation:** Creative feature additions beyond requirements
- **Documentation:** Comprehensive README and code comments
- **Testing:** Unit tests and integration test coverage
- **Deployment:** Live demo with proper CI/CD setup

Submission Guidelines

Required Deliverables

1. **Source Code:** GitHub repository with clear commit history
2. **Live Demo:** Deployed application with working features
3. **Documentation:** Setup instructions, feature overview, readme
4. **Database Schema:** ERD or schema documentation (bonus)

Submission Format

- **Repository:** Public GitHub repository
- **README:** Comprehensive project documentation
- **Demo URL:** Live application link
- **Video Demo:** Optional but recommended walkthrough
- **Frontend:** React, TypeScript, Vite, Tailwind CSS

- **Components:** Radix UI, Lucide Icons
- **Utilities:** Date-fns, UUID, clsx, Sonner
- **AI Integration:** OpenAI API

Architecture

ImpactCV follows a modern frontend architecture, primarily built with React components. The application is structured with:

- **Left Sidebar Panel:** Houses all the configuration options, organized into logical sections using Radix UI Accordion components for a clean and collapsible interface. Each section contains React forms managed by React Hook Form for efficient data handling.
- **Main Preview Area:** A dedicated React component that dynamically renders the CV based on the configuration state. It updates in real-time as users modify the input fields in the sidebar.
- **Theming System:** Implemented using `next-themes`, allowing users to switch between different visual themes. Each theme likely defines a set of CSS variables or Tailwind CSS configurations.
- **State Management:** React's built-in state management (likely using `useState` and `useContext` or potentially a more advanced state management solution if the application grows significantly) is used to manage the CV data and UI state.
- **AI Integration:** The "Tailor for Job Description" feature interacts with the OpenAI API through an asynchronous function call. The API response (in JSON format) is then used to update the application's state, effectively modifying the CV content.
- **Import/Export Logic:** Functions are implemented to handle the reading and writing of CV data in JSON format. The HTML export functionality likely involves dynamically generating HTML markup based on the current CV data and embedding the necessary CSS inline. PDF export leverages the browser's print functionality.

Getting Started

To run ImpactCV locally, follow these steps:

1. Clone the repository:

```
git clone https://github.com/asfand-dev/impact-cv.git
cd impact-cv
```

2. Install dependencies:

```
npm install
# or
yarn install
# or
pnpm install
```

3. Start the development server:

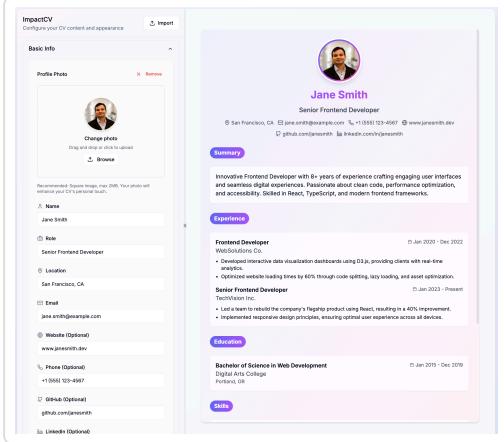
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npm run dev
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yarn dev
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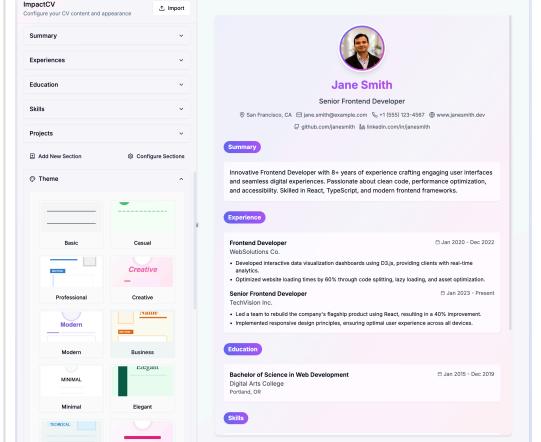
This will start the application on a local development server (<http://localhost:3000>).

Screenshots

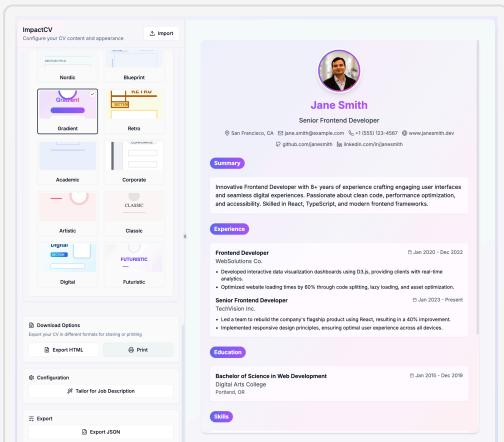
Here are some screenshots showcasing the ImpactCV interface and its features:



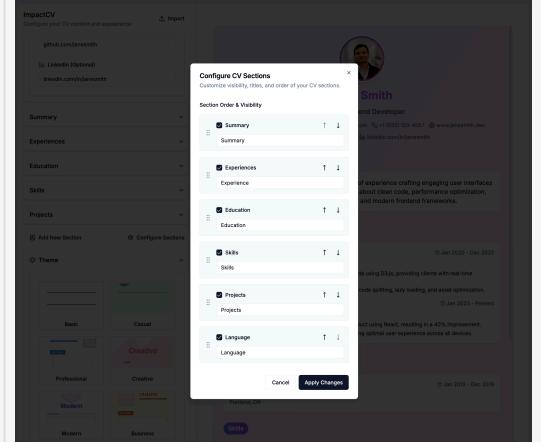
Main Layout 1



Main Layout 2



Main Layout 3



Configure Sections

Add Section

Tailor for Job Description

Basic

Gradient

Professional

Jane Smith
Senior Frontend Developer
Jane Smith | JaneSmith.dev | LinkedIn | GitHub | Email

Summary

Innovative Frontend Developer with 8+ years of experience crafting engaging user interfaces and seamless digital experiences. Passionate about clean code, performance optimization, and accessibility. Skilled in React, TypeScript, and modern front-end frameworks.

Experience

Frontend Developer
WebSolutions Co. | Jun 2020 - Dec 2022

- Developed interactive data visualization dashboards using D3.js, providing clients with real-time analytics.
- Optimized website loading times by 60% through code splitting, lazy loading, and asset optimization.

Senior Frontend Developer
TechVisions, Inc. | Jan 2023 - Present

- Led the development of the company's flagship product using React, resulting in a 40% improvement in user engagement.
- Implemented responsive design principles, ensuring optimal user experience across all devices.

Education

Bachelor of Science in Web Development | Jan 2019 - Dec 2019

Digital Arts College | Portland, OR

Skills

Frontend Development | React, Vue.js, Angular, TypeScript, JavaScript ES6+, HTML5, CSS3, SASS/SCSS, Tailwind CSS

UX/UI Design | Figma, Adobe XD, Responsive Design, Wireframing, Prototyping, User Research

Projects

E-commerce Platform Redesign | DataGrip

James Smith
Senior Frontend Developer
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EXPERIENCE

Frontend Developer
HumbleBee Co | Jun 2020 - Dec 2022

- Developed interactive data visualization dashboards using D3.js, providing clarity with real-time analytics.
- Optimized website loading times by 60% through code splitting, lazy loading, and asset optimization.

Senior Frontend Developer
TechInnovate Inc | Jan 2023 - Present

- Lead a team to relaunch the company's flagship product using React, resulting in a 45% improvement.
- Implemented responsive design principles, ensuring optimal user experience across all devices.

EDUCATION

Bachelor of Science in Web Development (Jan 2015 - Dec 2019)
Digital Arts College
Portland, OR

SKILLS

Frontend Development
HTML, CSS, Angular, TypeScript, JavaScript ES6+, HTML5, CSS3, SASS/SCSS, Tailwind CSS
UX/UI Design
Figma, Adobe XD, Responsive Design, Wireframing, Prototyping, User Research

PROJECTS

E-commerce Platform Redesign
RetailGiant

- Led complete frontend redesign of a major e-commerce platform, saving 2M+ monthly users
- Implemented a micro-frontend architecture to enable independent team deployments

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| <p>Jane Smith</p> <p>Senior Frontend Developer</p> <p>• San Francisco, CA www.smith@example.com +1 (555) 123-4567</p> <p>• www.janesmith.dev github.com/janesmith</p> <p>• linkedin.com/in/janesmith</p> <p>SUMMARY</p> <p>Innovative Frontend Developer with 8+ years of experience crafting engaging user interfaces and seamless digital experiences. Passionate about clean code, performance optimization, and accessibility. Skilled in React, TypeScript, and modern frontend frameworks.</p> <p>EXPERIENCE</p> <p>Frontend Developer Webolutions Co. Jan 2020 – Dec 2022</p> <ul style="list-style-type: none">Developed interactive data visualization dashboards using D3.js, providing clients with real-time analytics.Designed and implemented loading times by 60% through code splitting, lazy loading, and asset optimization. <p>Senior Frontend Developer TechVisions Inc. Jan 2018 – Present</p> <ul style="list-style-type: none">Led a team to rebuild the company's flagship product using React, resulting in a 30% increase in user satisfaction.Implemented responsive design principles, ensuring optimal user experience across all devices. <p>EDUCATION</p> <p>Bachelor of Science in Web Development Digital Arts College Jan 2015 – Dec 2019</p> <p>Digital Arts College Portland, OR</p> <p>SKILLS</p> <p>Frontend Development React, Vue.js, Angular, TypeScript, JavaScript ES6+, HTML5, CSS3, SASS/SCSS, Tailwind CSS</p> <p>UX/UI Design Figma, Adobe XD, Responsive Design, Wireframing, Prototyping, User Research</p> <p>PROJECTS</p> |  |
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Vibrant

 **Jane Smith**
Senior Frontend Developer
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Summary

Innovative Frontend Developer with 8+ years of experience crafting engaging user interfaces and seamless digital experiences. Passionate about clean code, performance optimization, and accessible design built in **React**, **TypeScript**, and modern frontend frameworks.

Experience

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Webolutions Co. (Jan 2020 - Dec 2022)

- Developed interactive data visualization dashboards using D3.js, providing clients with real-time analytics.
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- Led a team to redesign the company's flagship product using React, resulting in a 40% improvement.
- Implemented design principles, ensuring optimal user experience across all devices.

Education

Bachelor of Science in Web Development
Digital Arts College (Jan 2015 - Dec 2019)

Digital Marketing
Project Management

Skills

Frontend Development
React, Vue.js, Angular, TypeScript, JavaScript ES6+, HTML5, CSS3, SASS/SCSS, Tailwind CSS

UX/UI Design
Figma, Adobe XD, Responsive Design, Wireframing, Prototyping, User Research

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|  <p>JANE SMITH</p> <hr/> <p>Senior Frontend Developer</p> <p>• San Francisco, CA • ☎ jane.smith@example.com • 📞 (555) 123-0987</p> <p>• www.janesmith.dev • github.com/janesmith</p> <p>• linkedin.com/in/janesmith</p> <hr/> <p>SUMMARY</p> <p>Innovative Frontend Developer with 8+ years of experience crafting engaging user interfaces and seamless digital experiences. Passionate about clean code, performance optimization, and accessibility. Skilled in React, Typescript, and modern Frontend frameworks.</p> <hr/> <p>EXPERIENCE</p> <table border="1"> <tbody> <tr> <td>Frontend Developer</td> <td>Jan 2020 – Dec 2022</td> </tr> <tr> <td>Imaginative Inc.</td> <td></td> </tr> <tr> <td>• Developed interactive data visualization dashboards using D3.js, providing clients with real-time analytics.</td> <td></td> </tr> <tr> <td>• Implemented code splitting and lazy loading by 60% through code splitting, lazy loading, and asset optimization.</td> <td></td> </tr> <tr> <td>Senior Frontend Developer</td> <td>Jan 2023 – Present</td> </tr> <tr> <td>Imaginative Inc.</td> <td></td> </tr> <tr> <td>• Led a team to rebuild the company's flagship product using React, resulting in a 40% improvement.</td> <td></td> </tr> <tr> <td>• Implemented responsive design principles, ensuring optimal user experience across all devices.</td> <td></td> </tr> </tbody> </table> <hr/> <p>EDUCATION</p> <table border="1"> <tbody> <tr> <td>Bachelor of Science in Web Development</td> <td>Jan 2015 – Dec 2019</td> </tr> <tr> <td>Digital Arts College</td> <td></td> </tr> <tr> <td>Portland, OR</td> <td></td> </tr> </tbody> </table> <hr/> <p>SKILLS</p> | Frontend Developer | Jan 2020 – Dec 2022 | Imaginative Inc. | | • Developed interactive data visualization dashboards using D3.js, providing clients with real-time analytics. | | • Implemented code splitting and lazy loading by 60% through code splitting, lazy loading, and asset optimization. | | Senior Frontend Developer | Jan 2023 – Present | Imaginative Inc. | | • Led a team to rebuild the company's flagship product using React, resulting in a 40% improvement. | | • Implemented responsive design principles, ensuring optimal user experience across all devices. | | Bachelor of Science in Web Development | Jan 2015 – Dec 2019 | Digital Arts College | | Portland, OR | | <hr/> <hr/> <hr/> <hr/> |
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Summary

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Experience

Frontend Developer

Webolutions Co. | Jan 2010 - Dec 2012

- Developed interactive data visualization dashboards using D3.js, providing clients with real-time analytics.
- Optimized website loading times by 60% through code splitting, lazy loading, and asset optimization.

Senior Frontend Developer

Webolutions Co. | Jan 2012 - Present

- Led a team to rebuild the company's legacy product using React, resulting in a 40% improvement.
- Implemented responsive design principles, ensuring optimal user experience across all devices.

Education

Bachelor of Science in Web Development

Digital Arts College | Jan 2005 - Dec 2009

Skills

Frontend Development

React, Vue.js, Angular, TypeScript, JavaScript ES6+, HTML5, CSS3, SASS/SCSS, Tailwind CSS

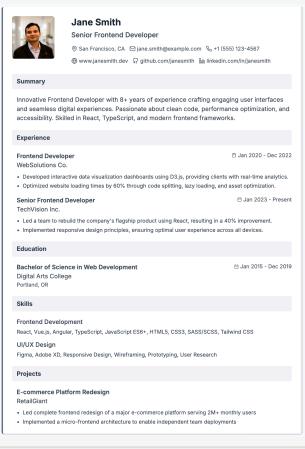
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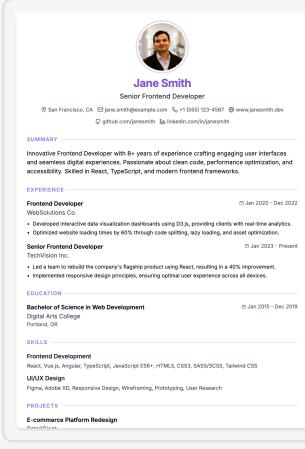
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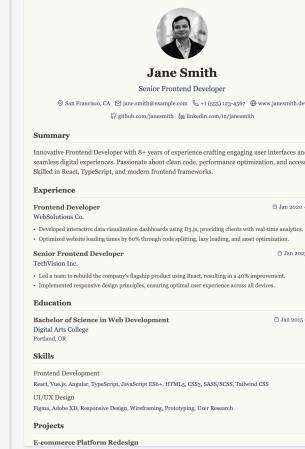
Casual

Retracted

Academic







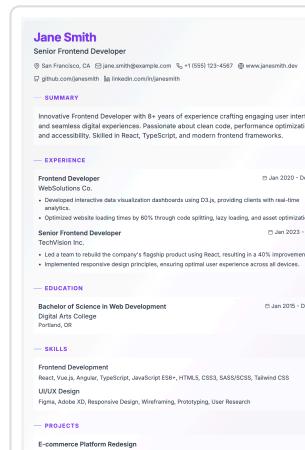
Corporate



Modern



Classic









Minimal



Futuristic



Without Photo



Usage

- Navigate the Left Sidebar:** Use the clearly separated sections in the left sidebar to input your information.
- Real-time Preview:** Observe the main preview area to see your CV take shape as you type.
- Configure Sections:** Customize section titles, toggle visibility, and reorder sections using the "Configure Sections" panel.
- Upload Photo (Optional):** Add a professional touch by uploading your profile photo.
- Choose a Theme:** Select from a variety of visually appealing themes to match your style.
- Tailor for Job:** Utilize the AI-powered job tailoring feature to optimize your CV for specific job applications.
- Import/Export:** Import existing configurations or export your current CV data as JSON.
- Download:** Export your finalized CV as an HTML file or generate a PDF for sharing and applying.

Contributing

We welcome contributions from the community! If you'd like to contribute to ImpactCV, please follow these guidelines:

1. Fork the repository.
2. Create a new branch for your feature or bug fix.
3. Make your changes and ensure proper testing.
4. Submit a pull request with a clear description of your changes.

Please adhere to the project's coding standards and best practices.

License

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