

Dividend Investment Tracker

A comprehensive web application for tracking and analyzing dividend investments, built with React, TypeScript, and PostgreSQL.

Overview

The Dividend Investment Tracker is a full-stack application designed to help investors manage their dividend-focused portfolio. It provides detailed visualization and analysis of investment performance, dividend income, and future projections.

Features

Portfolio Management

- **Investment Tracking:** Monitor your stock positions with details on cost basis, current value, and performance metrics
- **Sector Allocation:** Visual breakdown of portfolio diversification across market sectors
- **Performance Analytics:** Advanced metrics including total return, annualized return, and risk statistics

Dividend Tracking

- **Dividend History:** Comprehensive record of all dividend payments received
- **Dividend Calendar:** Visual calendar showing upcoming dividend payments
- **Income Analysis:** Breakdown of dividend income by month, quarter, and year

Financial Projections

- **Income Projections:** Estimate future dividend income based on historical growth rates
- **Portfolio Growth:** Project portfolio value with customizable growth rates
- **Reinvestment Scenarios:** Model the impact of dividend reinvestment on long-term returns

Advanced Analytics

- **Portfolio Weighting:** Tools for optimizing asset allocation
- **Custom Projections:** Adjust variables like growth rates, reinvestment percentages, and time horizons

- **Performance Metrics:** Calculate volatility, maximum drawdown, Sharpe ratio, and more

Technical Details

Architecture

- **Frontend:** React with TypeScript, using modern hooks and functional components
- **UI Components:** Custom components built with Tailwind CSS and shadcn/ui
- **State Management:** React Query for server state and local hooks for UI state
- **Data Visualization:** Interactive charts using Recharts library

Backend

- **API:** Express.js server with RESTful endpoints
- **Database:** PostgreSQL with Drizzle ORM for data modeling and queries
- **Data Processing:** Server-side utilities for financial calculations and projections

Data Models

- **Investments:** Stocks with associated metadata like sector, cost basis, and purchase date
- **Dividends:** Individual dividend payments with ex-date, payment date, and amount
- **Activities:** Transaction log of portfolio events like purchases and dividend receipts
- **Projection Settings:** User preferences for financial projection calculations

Getting Started

Prerequisites

- Node.js 18+ and npm
- PostgreSQL database

Installation

1. Clone the repository
2. Install dependencies with npm install
3. Set up environment variables including database connection details
4. Run database migrations with npm run db:push

5. Start the application with `npm run dev`

Data Initialization

The application includes a database seeding script that loads investment and dividend data from CSV files, eliminating the need for manual data entry.

Tech Stack

- **Frontend:** React, TypeScript, TailwindCSS, shadcn/ui, Recharts, React Query
- **Backend:** Express.js, Node.js
- **Database:** PostgreSQL with Drizzle ORM
- **Build Tools:** Vite, ESBuild

Future Enhancements

- User authentication and multi-user support
- Real-time stock price updates
- Tax optimization calculations
- Mobile application
- Export functionality for reports and tax documentation

This application serves as a comprehensive tool for dividend investors seeking to track their investments, analyze performance, and plan for future income streams through detailed projections and analytics.