TaskTuner UI Guide

This comprehensive guide covers all user interface features and workflows in TaskTuner.

Overview

TaskTuner's interface consists of three main sections:

- **Home Page** - Overview and navigation

- **Tasks Management** - Set effort estimates for imported tasks

- **Schedule View** - Visualize and interact with generated schedules

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Navigation

Header Navigation

The top header appears on all pages and provides:

- **← Home** - Return to the home page

- **TaskTuner** (center) - Application title, also links to home

- **Tasks** - Go to task management interface

- **Schedule** - Go to schedule visualization

Visual Design

- **Color Scheme**: Blue header (#799EFF) with gold accents (#FFDE63, #FFBC4C)

- **Typography**: Atkinson Hyperlegible Mono font for accessibility

- **Layout**: Clean, minimal design with clear visual hierarchy

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Home Page (/)

Purpose

Welcome screen with feature overview and quick navigation.

Features

- **Animated Introduction**: Smooth fade-in animations for all elements

- **Feature Cards**: Three highlighted capabilities:
  - 🎯 Smart Scheduling
  - 📊 Trello Integration
  - ⚡ Effort Tracking
- **Action Buttons**:
  - "📝 Go to Tasks" - Navigate to task management
  - "📅 View Schedule" - Navigate to schedule view

User Actions

- Click feature cards to learn about capabilities
- Use action buttons for quick navigation
- Access full navigation from header

Tasks Management (/tasks-ui)

Purpose

View Trello tasks and set effort estimates for scheduling.

Interface Elements

Statistics Bar

Located at the top, shows:

- **Task Count**: Total number of imported tasks
- **Total Hours**: Sum of all effort estimates
- Updates in real-time as you edit estimates

Task List

Each task displays:

- **Checkbox**: Select for bulk operations
- **Task Name**: Imported from Trello (darker text if effort > 0)
- **Effort Input**: Number field for hours estimate

Control Buttons

- **Bulk Set**: Apply effort to multiple selected tasks

- **Save Effort**: Persist all changes to database

Workflows

Setting Individual Effort

1. Locate the task in the list

2. Click in the effort input field (right side)

3. Enter estimated hours (can be decimal, e.g., 2.5)

4. Notice the unsaved changes indicator appears

5. Click "Save Effort" to persist changes

Bulk Setting Effort

1. Check the boxes next to tasks you want to update

2. Click "Bulk Set" button

3. Enter the effort hours in the popup

4. Click "Apply" to set effort for all selected tasks

5. Click "Save Effort" to persist changes

Understanding Visual Cues

- **Gray text**: Task has no effort estimate (0 hours)

- **Dark text**: Task has an effort estimate

- **Yellow warning**: "You have unsaved changes!" indicator

- **Green confirmation**: "✅ Saved!" success modal

Interactive Features

Real-Time Statistics

- Statistics update immediately as you change effort values

- No need to save to see updated totals

- Helps track total workload while estimating

Unsaved Changes Warning

- Appears when any effort values are modified

- Sticky warning in bottom-right corner

- Browser warning if you try to leave with unsaved changes

Save Confirmation

- Modal popup confirms successful saves

- Auto-refresh the page to show latest data

- Clear visual feedback for all operations

Schedule View (/schedule-ui)

Purpose

Visualize task schedules using different algorithms and an interactive calendar.

Interface Components

Algorithm Controls

Located below the header:

- **Algorithm Dropdown**: Choose scheduling strategy

    o Balanced (default)

    o Largest First

    o Smallest First

- **Regenerate Button**: Apply selected algorithm and refresh view

Schedule Statistics

Displays key metrics:

- **Days**: Number of days in generated schedule

- **Tasks**: Total number of scheduled task instances

- **Total Hours**: Sum of all effort across all days

Interactive Calendar

Powered by FullCalendar library:

- **Month View**: Default view showing tasks as all-day events

- **Week View**: Available via header controls

- **Navigation**: Previous/next month, "Today" button

- **Task Events**: Show as colored blocks with name and effort

Algorithm Options

Balanced Algorithm

- **Use Case**: General purpose, maintains task priorities

- **Behavior**: Schedules tasks in their original order

- **Visual Result**: Mixed task sizes throughout schedule

- **Best For**: When task order reflects priorities

Largest First Algorithm

- **Use Case**: Tackle big tasks early

- **Behavior**: Sorts by effort (highest first), then schedules

- **Visual Result**: Large tasks appear in early days

- **Best For**: Reducing cognitive load, getting hard tasks done

Smallest First Algorithm

- **Use Case**: Build momentum with quick wins

- **Behavior**: Sorts by effort (lowest first), then schedules

- **Visual Result**: Many small tasks early, larger ones later

- **Best For**: Clearing backlog, building confidence

Interactive Features

Drag and Drop

- **Functionality**: Move tasks between days by dragging

- **Feedback**: Visual drag indicator and drop zones

- **Confirmation**: Alert popup shows the change made

- **Limitation**: Changes are visual only (not persisted)

View Switching

- **Month View**: See full month overview with all tasks

- **Week View**: Detailed view of specific week

- **Navigation**: Jump to different time periods

Real-Time Updates

- **Algorithm Changes**: Instantly regenerate schedule

- **Statistics Updates**: Reflect current schedule state

- **Visual Refresh**: Smooth transitions between views

Workflow Examples

Comparing Algorithms

1. Start with default "Balanced" view

2. Note the task distribution and early/late tasks

3. Change dropdown to "Largest First"

4. Click "Regenerate" to see the difference

5. Try "Smallest First" for comparison

6. Choose the algorithm that fits your work style

Planning Your Week

1. Navigate to the current week in the calendar

2. Review tasks scheduled for each day

3. Check if the daily workload feels reasonable

4. Use drag-and-drop to move tasks if needed

5. Consider switching algorithms if the distribution doesn't work

Adjusting Workload

1. Look at the "Total Hours" statistic

2. If too high for your timeframe, return to Tasks page

3. Reduce effort estimates for some tasks

4. Return to Schedule view to see updated distribution

5. Repeat until workload feels manageable

Visual Design System

Color Palette

- **Primary Blue**: #799EFF (headers, links, titles)

- **Light Background**: #FEFFC4 (page backgrounds)

- **Gold Accent 1**: #FFDE63 (buttons, highlights)

- **Gold Accent 2**: #FFBC4C (secondary buttons, warnings)

Typography

- **Font**: Atkinson Hyperlegible Mono

- **Weights**: Regular (400) and Bold (700)

- **Purpose**: Accessibility and readability focused

Interactive Elements

- **Buttons**: Rounded corners, hover effects, clear labels

- **Form Inputs**: Clean borders, focus states, proper sizing

- **Modals**: Centered, semi-transparent overlays, clear actions

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Accessibility Features

Keyboard Navigation

- All interactive elements are keyboard accessible

- Tab order follows logical page flow

- Enter key activates buttons and form submissions

Visual Accessibility

- High contrast color combinations

- Clear visual hierarchy with size and color

- Readable font designed for accessibility

- Sufficient spacing between interactive elements

Screen Reader Support

- Semantic HTML structure

- Proper heading hierarchy

- Descriptive button and link text

- Form labels associated with inputs

Mobile Responsiveness

Responsive Breakpoints

- **Desktop**: Full feature set, multi-column layouts

- **Tablet**: Adapted layouts, maintained functionality

- **Mobile**: Stacked layouts, touch-friendly sizing

Mobile-Specific Features

- **Touch Targets**: Appropriately sized for finger interaction

- **Scroll Areas**: Smooth scrolling with momentum

- **Viewport**: Properly configured for mobile browsers

Mobile Limitations

- Drag-and-drop functionality may be limited on touch devices

- Calendar view automatically adapts to smaller screens

- Some features may require landscape orientation for best experience

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Browser Compatibility

Supported Browsers

- **Chrome**: 90+ (full feature support)

- **Firefox**: 90+ (full feature support)

- **Safari**: 14+ (full feature support)

- **Edge**: 90+ (full feature support)

Required Features

- **JavaScript**: ES6+ features required

- **CSS**: Modern flexbox and grid support

- **APIs**: Fetch API for backend communication

Progressive Enhancement

- Core functionality works without JavaScript

- Enhanced features require JavaScript enabled

- Graceful degradation for older browsers

Performance Considerations

Loading Optimization

- **Fonts**: Loaded from Google Fonts CDN with display=swap

- **Libraries**: FullCalendar loaded from CDN for caching

- **Images**: Minimal image usage, mostly emoji and icons

Interaction Performance

- **Real-time Updates**: Optimized DOM updates for statistics

- **Calendar Rendering**: Efficient event management

- **Form Handling**: Debounced input handling for large task lists

Memory Management

- **Event Listeners**: Properly cleaned up on page changes

- **Calendar Instance**: Destroyed and recreated when needed

- **DOM Updates**: Batched updates to minimize reflow

Common User Workflows

First-Time Setup

1. **Start**: Visit home page, review features

2. **Configure**: Set up Trello integration (see TRELLO_SETUP.md)

3. **Import**: Go to Tasks page, verify Trello tasks loaded

4. **Estimate**: Set effort estimates for your tasks

5. **Schedule**: View generated schedule, try different algorithms

Daily Planning

1. **Review**: Check schedule for upcoming days

2. **Adjust**: Modify effort estimates if needed

3. **Reorganize**: Use drag-and-drop to adjust task timing

4. **Export**: Use calendar export features (if available)

Weekly Review

1. **Statistics**: Review total hours and task counts

2. **Algorithm**: Experiment with different scheduling approaches

3. **Refinement**: Adjust effort estimates based on actual completion

4. **Planning**: Look ahead to next week's schedule

Troubleshooting UI Issues

Common Problems

Tasks Not Loading

- **Symptoms**: Empty task list, no Trello cards

- **Solutions**: Check Trello credentials, verify board access

- **Fallback**: Ensure task_data.json exists with sample data

Schedule Not Generating

- **Symptoms**: Empty calendar, no scheduled tasks

- **Solutions**: Ensure tasks have effort estimates > 0

- **Check**: Verify DAILY_HOUR_LIMIT configuration

Save Not Working

- **Symptoms**: Changes not persisting, error messages

- **Solutions**: Check browser console for errors

- **Network**: Verify API endpoints are responding

Calendar Display Issues

- **Symptoms**: Broken layout, missing events

- **Solutions**: Check browser compatibility, JavaScript errors

- **Refresh**: Try hard refresh (Ctrl+F5 or Cmd+Shift+R)

Debug Information

- **Browser Console**: Check for JavaScript errors

- **Network Tab**: Verify API calls are succeeding

- **Local Storage**: Clear browser data if needed

- **Server Logs**: Check Python console for backend errors