

My Emacs config

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1 Package management

1.1 MELPA

```
(require 'package)
(add-to-list 'package-archives
  '("melpa" . "https://melpa.org/packages/") t)
(package-initialize)
```

1.2 Better package setup

Use use-package

```
(unless (package-installed-p 'use-package)
  (package-refresh-contents)
  (package-install 'use-package))
(eval-and-compile
  ; Always make sure packages are installed correctly at every startup
  (setq use-package-always-ensure t
        use-package-expand-minimally t))
```

1.3 Modernized package menu

Use paradox.

```
(use-package paradox
  :ensure t
  :init (paradox-enable))
```

2 Pretty Emacs

2.1 Theme

Although Atom is being sunset by GitHub, the default theme it provided is one of the best-looking and easy-on-the-eyes color scheme out in the wild. doom-one theme is more actively maintained than atom-one-dark-theme.

```
(use-package doom-themes
  :ensure t
  :config)
```

```
(setq doom-themes-enable-bold t
      doom-themes-enable-italic t)
(load-theme 'doom-one t))
```

2.2 Font

JuliaMono provides the most comprehensive unicode support.

```
(set-frame-font "JuliaMono 15" nil t)
; Apply the font to emacsclients
(add-to-list 'default-frame-alist '(font . "JuliaMono 15"))
```

Use D2Coding for hangul (Korean letters). To reliably set a hangul font, it needs to be run lately. I did not experiment with the earliest possible stage it needs to run, but it does work when run in a hook ‘after-make-frame-functions’.

```
(defun set-hangul-font (_)
  (set-fontset-font t 'hangul (font-spec :name "D2Coding"))
  (setq face-font-rescale-alist '(("D2Coding" . 1.2))))
(add-to-list 'after-make-frame-functions #'set-hangul-font)
```

D2Coding is scaled so that a single Korean letter corresponds to two ASCII letters:

English	Korean
Emacs	이맥스
Vim	빔

2.3 Icons

```
(use-package all-the-icons
  :ensure t
  :if (display-graphic-p))
```

2.4 Modeline Theme

```
(use-package doom-modeline
  :ensure t
  :hook (after-init . doom-modeline-mode))
```

2.5 File explorer

A Tree layout file explorer.

```
(use-package treemacs
  :ensure t
  :bind
  (:map global-map
```

```

("M-0"      . treemacs-select-window)
("C-x t 1"  . treemacs-delete-other-windows)
("C-x t t"  . treemacs)
("C-x t d"  . treemacs-select-directory)
("C-x t B"  . treemacs-bookmark)
("C-x t C-t" . treemacs-find-file)
("C-x t M-t" . treemacs-find-tag)))

```

```

(use-package treemacs-icons-dired
  :hook (dired-mode . treemacs-icons-dired-enable-once)
  :ensure t)

```

```

(use-package treemacs-magit
  :after (treemacs magit)
  :ensure t)

```

2.6 Miscellaneous

Seamless title bar in macOS.

```

(tool-bar-mode -1)
(use-package ns-auto-titlebar
  :ensure t
  :config (ns-auto-titlebar-mode))

```

Also remove the excessive scroll bar.

```
(scroll-bar-mode -1)
```

Line numbering.

```
(global-display-line-numbers-mode)
```

Get rid of irritating beep-boops.

```

(defun flash-mode-line ()
  (invert-face 'mode-line)
  (run-with-timer 0.1 nil #'invert-face 'mode-line))
(setq visible-bell nil ring-bell-function #'flash-mode-line)

```

Prettify symbols.

```
(global-prettify-symbols-mode 1)
```

Dashboard.

```
;; (use-package page-break-lines
;;   :ensure t)

(use-package dashboard
  :ensure t
  :config
  (dashboard-setup-startup-hook)
  ; show dashboard after emacsclient -c
  (setq initial-buffer-choice
    (lambda () (get-buffer-create "*dashboard*")))

  (setq dashboard-banner-logo-title "Hi, Jay!")
  (setq dashboard-startup-banner "~/Downloads/blackhole-lines.svg")
  (setq dashboard-image-banner-max-width 512)
  (setq dashboard-image-banner-max-height 512)
  (setq dashboard-center-content t)
  (setq dashboard-set-heading-icons t)
  (setq dashboard-set-file-icons t))
```

3 Key bindings

3.1 Hints

Show what key bindings are available.

```
(use-package which-key
  :ensure t
  :config (which-key-mode))
```

Show completions.

```
(use-package ivy
  :ensure t
  :config
  (ivy-mode)
  (setq ivy-use-virtual-buffers t))
```

3.2 Navigation

Incremental search using ivy.

```
(use-package swiper
  :ensure t
  :after ivy
  :bind ("C-s" . swiper-isearch))
```

Use numbering to move frames.

```
(use-package window-numbering
  :ensure t
  :config (window-numbering-mode))
```

3.3 Miscellaneous

Use command as meta in macOS.

```
(setq mac-command-modifier 'meta)
```

Stop fighting indentation in Org mode code snippets.

```
(setq org-adapt-indentation nil)
```

4 Languages

4.1 Tools

Syntax checking.

```
(use-package flycheck
  :ensure t
  :init (global-flycheck-mode))
```

Completion

```
(use-package company
  :ensure t
  :init (global-company-mode))
```

4.1.1 Language server protocol

Settings for LSP.

```
(use-package lsp-mode
  :ensure t
  :init (setq lsp-keymap-prefix "C-c l")
  :hook
  ((tuareg-mode . lsp)
   (lsp-mode . lsp-enable-which-key-integration))
  :commands lsp)
```

```
(use-package lsp-ui
  :ensure t
  :after lsp-mode
  :config)
```

```
(setq lsp-ui-doc-show-with-cursor t))

(use-package lsp-ivy
  :ensure t
  :after (lsp-mode ivy)
  :commands lsp-ivy-workspace-symbol)

;; (use-package lsp-treemacs
;;   :ensure t
;;   :after (lsp-mode treemacs)
;;   :commands lsp-treemacs-errors-list)
```

4.2 Lisps

Pseudo-structural editing.

```
(use-package paredit
  :ensure t
  :init
  (autoload 'enable-paredit-mode "paredit"
    "Turn on pseudo-structural editing of Lisp code."
    t)
  :config
  (add-hook 'emacs-lisp-mode-hook #'enable-paredit-mode)
  (add-hook 'eval-expression-minibuffer-setup-hook #'enable-paredit-
mode)
  (add-hook 'ielm-mode-hook #'enable-paredit-mode)
  (add-hook 'lisp-mode-hook #'enable-paredit-mode)
  (add-hook 'lisp-interaction-mode-hook #'enable-paredit-mode)
  (add-hook 'scheme-mode-hook #'enable-paredit-mode))
```

Prettify lambda.

```
(defun prettify-lambda ()
  "Prettify lambda"
  (push '("lambda" . 955) prettify-symbols-alist))
```

4.2.1 Scheme

Set scheme interpreter to Chicken Scheme.

```
(setq scheme-program-name "csi")
```

Use geiser.

```
(use-package geiser-chicken
  :ensure t)
```

Prettify symbols.

```
(add-hook 'scheme-mode-hook #'prettify-lambda)
```

4.3 OCaml

These packages are installed via ‘opam’, not from MELPA.

```
(require 'opam-user-setup "~/.emacs.d/opam-user-setup.el")
(use-package ocamlformat
  :ensure nil
  :custom (ocamlformat-enable 'enable-outside-detected-project)
  :bind (:map tuareg-mode-map
    ("C-M-<tab>" . ocamlformat))
  :hook (before-save . ocamlformat-before-save))
```

Better error message.

```
(defun set-ocaml-error-regexp ()
  (set
    'compilation-error-regexp-alist
    (list '("[Ff]ile \\(\\\"\\\".*?\\\"\\\"), line \\(-?[0-9]+\\)\\(, characters \\(-?[0-9]+\\)-\\([0-9]+\\)\\)?\\\"\\\"\\(:\\n\\\"\\\"(Warning .*?\\\"\\\"|\\\"\\\"(Error\\\"\\\"\\\"\\):\\\"\\\")?"
      2 3 (5 . 6) (9 . 11) 1 (8 compilation-message-face))))))

(add-hook 'tuareg-mode-hook #'set-ocaml-error-regexp)
(add-hook 'caml-mode-hook #'set-ocaml-error-regexp)
```

4.4 Python

Use elpy.

```
(use-package elpy
  :ensure t
  :init (elpy-enable))
```

4.5 Org mode

Font size and symbols.

```
(use-package org-superstar
  :ensure t
  :config
  ;; hide #+TITLE:
  (setq org-hidden-keywords '(title))
  ;; set basic title font
  (set-face-attribute 'org-level-8 nil :weight 'bold :inherit 'default))
```



```
;; Low levels are unimportant = no scaling
(set-face-attribute 'org-level-7 nil :inherit 'org-level-8)
(set-face-attribute 'org-level-6 nil :inherit 'org-level-8)
(set-face-attribute 'org-level-5 nil :inherit 'org-level-8)
(set-face-attribute 'org-level-4 nil :inherit 'org-level-8)
;; Top ones get scaled the same as in LaTeX (\large, \Large, \LARGE)
(set-face-attribute 'org-level-3 nil :inherit 'org-level-8 :height 1.2) ;\large
(set-face-attribute 'org-level-2 nil :inherit 'org-level-8 :height 1.44) ;\Large
(set-face-attribute 'org-level-1 nil :inherit 'org-level-8 :height 1.728) ;\LARGE
;; Only use the first 4 styles and do not cycle.
(setq org-cycle-level-faces nil)
(setq org-n-level-faces 4)
;; Document Title, (\huge)
(set-face-attribute 'org-document-title nil
  :height 2.074
  :foreground 'unspecified
  :inherit 'org-level-8)
(add-hook 'org-mode-hook (lambda () (org-superstar-mode 1)))
```

Prettify symbols.

```
(add-hook
 'org-mode-hook
 (lambda ()
  "Prettify Org mode symbols"
  (push '("[ ]" . " ") prettify-symbols-alist)
  (push '("[X]" . " ") prettify-symbols-alist)
  (push '("[-]" . " ") prettify-symbols-alist)))
```

Do not open a new window when editing source.

```
(setq org-src-window-setup 'current-window)
```

Babel.

```
(org-babel-do-load-languages
 'org-babel-load-languages
 '((scheme . t)
  (python . t)))
(setq org-confirm-babel-evaluate nil)
```

4.5.1 \LaTeX

```
(use-package ox
 :ensure nil
 :config
```

```
(setq org-format-latex-options
(plist-put org-format-latex-options :scale 1.5))
(setq org-latex-create-formula-image-program 'dvisvgm)
(setq org-preview-latex-default-process 'dvisvgm))
```

4.6 Miscellaneous

Visually match parentheses.

```
(use-package rainbow-delimiters
:ensure t
:config (add-hook 'prog-mode-hook #'rainbow-delimiters-mode))
```

5 Miscellaneous

5.1 Git

Use Magit.

```
(use-package magit
:ensure t
:bind (("C-c g" . magit-file-dispatch))) ; instead of C-c M-g, as recommended by the manual
```

5.2 Project management

Use projectile

```
(use-package projectile
:ensure t
:init (projectile-mode +1)
:bind (:map projectile-mode-map
("C-c p" . projectile-command-map)))
```

5.3 Dired

```
(use-package dired
:ensure nil
:config (setq dired-kill-when-opening-new-dired-buffer t))
```

5.4 Terminal and shell

Use vterm.

```
(use-package vterm
:ensure t)
```