



The fontawesome-free package

Up-to-date Lua^AT_EX support for Font Awesome

Marc Penninga*

Version 1.1.2 (2024-11-24); contains version 6.7.1 of the Font Awesome fonts

Abstract

There are several packages on CTAN that provide access to the free *Font Awesome* icons, but these have all become outdated and are missing many icons from newer versions of Font Awesome. The **fontawesome-free** package deals with this problem by building the \LaTeX support dynamically from data in the fonts themselves; updating the package is as simple as replacing the font files with newer ones . The drawback of this approach is that the package only works with Lua^AT_EX .

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1 Installation

This package is installed by copying the contents of the `texmf/` directory to either your `$TEXMFLOCAL` or your `$TEXMFHOME` tree. Installing it in `$TEXMFLOCAL` will make the package available to all users on the system; installing it in `$TEXMFHOME` makes it available just for you. The exact values of `$TEXMFLOCAL` and `$TEXMFHOME` depend on your TeX installation; see your installation's documentation for more information. If you are using TeX Live, you can find the value of these variables by running



```
kpsewhich -expand-var '$TEXMFLOCAL'
```

and similarly for `$TEXMFHOME`.

*URL:  github.com/drs-p/fontawesome-free

2 Usage

The fontawesome-free package contains all icons from the free subset of the Font Awesome fonts.

`\fa` The package provides one command, `\fa`, with a single mandatory argument: the *<name>* of the icon. Some icons have light or “open” variants, like  versus . Those variants are accessed by adding `-o` to the icon name: `\fa{file-pdf-o}` versus `\fa{file-pdf}`. A full list of icons and their names is included in the appendices.

`\fa*` By default, the Font Awesome icons have varying widths. The `\fa` command has a starred variant `\fa*` that produces fixed-width icons, by centering them in a 1.25em wide box.

3 Copyright

The fonts are Copyright 2024 Fonticons, Inc. (<https://fontawesome.com>) with Reserved Font Name: “Font Awesome”. All other files are Copyright 2024 Marc Penninga.

License

The Font Awesome Free fonts are released under the SIL Open Font License, version 1.1. The rest of this package is released under the LaTeX Project Public License, version 1.3c.

All brand icons are trademarks of their respective owners. The use of these trademarks does not indicate endorsement of the trademark holder by Font Awesome or the author, nor vice versa. **Please do not use brand logos for any purpose except to represent the company, product, or service to which they refer.**







Appendix A List of icons







































	<i>address-book</i>
	<i>address-book-o</i>
	<i>address-card</i>
	<i>address-card-o</i>
	<i>align-center</i>
	<i>align-justify</i>
	<i>align-left</i>
	<i>align-right</i>
	<i>anchor</i>
	<i>anchor-circle-check</i>
	<i>anchor-circle-exclamation</i>
	<i>anchor-circle-xmark</i>
	<i>anchor-lock</i>
	<i>angle-down</i>
	<i>angle-left</i>
	<i>angle-right</i>
	<i>angle-up</i>
	<i>angles-down</i>
	<i>angles-left</i>
	<i>angles-right</i>
	<i>angles-up</i>
	<i>ankh</i>
	<i>apple-whole</i>
	<i>archway</i>
	<i>arrow-down</i>
	<i>arrow-down-1-9</i>
	<i>arrow-down-9-1</i>
	<i>arrow-down-a-z</i>
	<i>arrow-down-long</i>
	<i>arrow-down-short-wide</i>
	<i>arrow-down-up-across-line</i>
	<i>arrow-down-up-lock</i>
	<i>arrow-down-wide-short</i>
	<i>arrow-down-z-a</i>
	<i>arrow-left</i>
	<i>arrow-left-long</i>
	<i>arrow-pointer</i>
	<i>arrow-right</i>
	<i>arrow-right-arrow-left</i>



	<i>arrow-right-from-bracket</i>
	<i>arrow-right-long</i>
	<i>arrow-right-to-bracket</i>
	<i>arrow-right-to-city</i>
	<i>arrow-rotate-left</i>
	<i>arrow-rotate-right</i>
	<i>arrow-trend-down</i>
	<i>arrow-trend-up</i>
	<i>arrow-turn-down</i>
	<i>arrow-turn-up</i>
	<i>arrow-up</i>
	<i>arrow-up-1-9</i>
	<i>arrow-up-9-1</i>
	<i>arrow-up-a-z</i>
	<i>arrow-up-from-bracket</i>
	<i>arrow-up-from-ground-water</i>
	<i>arrow-up-from-water-pump</i>
	<i>arrow-up-long</i>
	<i>arrow-up-right-dots</i>
	<i>arrow-up-right-from-square</i>
	<i>arrow-up-short-wide</i>
	<i>arrow-up-wide-short</i>
	<i>arrow-up-z-a</i>
	<i>arrows-down-to-line</i>
	<i>arrows-down-to-people</i>
	<i>arrows-left-right</i>
	<i>arrows-left-right-to-line</i>
	<i>arrows-rotate</i>
	<i>arrows-spin</i>
	<i>arrows-split-up-and-left</i>
	<i>arrows-to-circle</i>
	<i>arrows-to-dot</i>
	<i>arrows-to-eye</i>
	<i>arrows-turn-right</i>
	<i>arrows-turn-to-dots</i>
	<i>arrows-up-down</i>
	<i>arrows-up-down-left-right</i>
	<i>arrows-up-to-line</i>
	<i>atom</i>
	<i>audio-description</i>
	<i>award</i>
	<i>baby</i>







































	<i>baby-carriage</i>
	<i>backward</i>
	<i>backward-fast</i>
	<i>backward-step</i>
	<i>bacon</i>
	<i>bacteria</i>
	<i>bacterium</i>
	<i>bag-shopping</i>
	<i>bahai</i>
	<i>ban</i>
	<i>ban-smoking</i>
	<i>bandage</i>
	<i>barcode</i>
	<i>bars</i>
	<i>bars-progress</i>
	<i>bars-staggered</i>
	<i>baseball</i>
	<i>baseball-bat-ball</i>
	<i>basket-shopping</i>
	<i>basketball</i>
	<i>bath</i>
	<i>battery-empty</i>
	<i>battery-full</i>
	<i>battery-half</i>
	<i>battery-quarter</i>
	<i>battery-three-quarters</i>
	<i>bed</i>
	<i>bed-pulse</i>
	<i>beer-mug-empty</i>
	<i>bell</i>
	<i>bell-concierge</i>
	<i>bell-o</i>
	<i>bell-slash</i>
	<i>bell-slash-o</i>
	<i>bezier-curve</i>
	<i>bicycle</i>
	<i>binoculars</i>
	<i>biohazard</i>
	<i>blender</i>
	<i>blender-phone</i>
	<i>blog</i>
	<i>bold</i>







































 bolt
 bolt-lightning
 bomb
 bone
 bong
 book
 book-atlas
 book-bible
 book-bookmark
 book-journal-whills
 book-medical
 book-open
 book-open-reader
 book-quran
 book-skull
 book-tanakh
 bookmark
 bookmark-o
 border-all
 border-none
 border-top-left
 bore-hole
 bottle-droplet
 bottle-water
 bowl-food
 bowl-rice
 bowling-ball
 box
 box-archive
 box-open
 box-tissue
 boxes-packing
 boxes-stacked
 braille
 brain
 bread-slice
 bridge
 bridge-circle-check
 bridge-circle-exclamation
 bridge-circle-xmark
 bridge-lock
 bridge-water










































 briefcase
 briefcase-medical
 broom
 broom-ball
 brush
 bucket
 bug
 bug-slash
 bugs
 building
 building-circle-arrow-right
 building-circle-check
 building-circle-exclamation
 building-circle-xmark
 building-columns
 building-flag
 building-lock
 building-ngo
 building-o
 building-shield
 building-un
 building-user
 building-wheat
 bullhorn
 bullseye
 burger
 burst
 bus
 bus-simple
 business-time
 cable-car
 cake-candles
 calculator
 calendar
 calendar-check
 calendar-check-o
 calendar-day
 calendar-days
 calendar-days-o
 calendar-minus
 calendar-minus-o

 calendar-o
 calendar-plus
 calendar-plus-o
 calendar-week
 calendar-xmark
 calendar-xmark-o
 camera
 camera-retro
 camera-rotate
 campground
 candy-cane
 cannabis
 capsules
 car
 car-battery
 car-burst
 car-on
 car-rear
 car-side
 car-tunnel
 caravan
 caret-down
 caret-left
 caret-right
 caret-up
 carrot
 cart-arrow-down
 cart-flatbed
 cart-flatbed-suitcase
 cart-plus
 cart-shopping
 cash-register
 cat
 certificate
 chair
 chalkboard
 chalkboard-user
 champagne-glasses
 charging-station
 chart-area
 chart-bar
 chart-bar-o


 *chart-column*
 *chart-diagram*
 *chart-gantt*
 *chart-line*
 *chart-pie*
 *chart-simple*
 *check*
 *check-double*
 *check-to-slot*
 *cheese*
 *chess*
 *chess-bishop*
 *chess-bishop-o*
 *chess-board*
 *chess-king*
 *chess-king-o*
 *chess-knight*
 *chess-knight-o*
 *chess-pawn*
 *chess-pawn-o*
 *chess-queen*
 *chess-queen-o*
 *chess-rook*
 *chess-rook-o*
 *chevron-down*
 *chevron-left*
 *chevron-right*
 *chevron-up*
 *child*
 *child-combatant*
 *child-dress*
 *child-reaching*
 *children*
 *church*
 *circle*
 *circle-arrow-down*
 *circle-arrow-left*
 *circle-arrow-right*
 circle-arrow-up
 circle-check
 circle-check-o
 circle-chevron-down

 *circle-chevron-left*
 *circle-chevron-right*
 *circle-chevron-up*
 *circle-dollar-to-slot*
 *circle-dot*
 *circle-dot-o*
 *circle-down*
 *circle-down-o*
 *circle-exclamation*
 *circle-h*
 *circle-half-stroke*
 *circle-info*
 *circle-left*
 *circle-left-o*
 *circle-minus*
 *circle-nodes*
 *circle-notch*
 *circle-o*
 *circle-pause*
 *circle-pause-o*
 *circle-play*
 *circle-play-o*
 *circle-plus*
 *circle-question*
 *circle-question-o*
 *circle-radiation*
 *circle-right*
 *circle-right-o*
 *circle-stop*
 *circle-stop-o*
 *circle-up*
 *circle-up-o*
 *circle-user*
 *circle-user-o*
 *circle-xmark*
 *circle-xmark-o*
 *city*
 *clapperboard*
 clipboard
 clipboard-check
 clipboard-list










































 *clipboard-o*
 *clipboard-question*
 *clipboard-user*
 *clock*
 *clock-o*
 *clock-rotate-left*
 *clone*
 *clone-o*
 *closed-captioning*
 *closed-captioning-o*
 *cloud*
 *cloud-arrow-down*
 *cloud-arrow-up*
 *cloud-bolt*
 *cloud-meatball*
 *cloud-moon*
 *cloud-moon-rain*
 *cloud-rain*
 *cloud-showers-heavy*
 *cloud-showers-water*
 *cloud-sun*
 *cloud-sun-rain*
 *clover*
 *code*
 *code-branch*
 *code-commit*
 *code-compare*
 *code-fork*
 *code-merge*
 *code-pull-request*
 *coins*
 *comment*
 *comment-dollar*
 *comment-dots*
 *comment-dots-o*
 *comment-medical*
 *comment-nodes*
 *comment-o*
 comment-slash
 comment-sms
 comments
 comments-dollar

 *comments-o*
 *compact-disc*
 *compass*
 *compass-drafting*
 *compass-o*
 *compress*
 *computer*
 *computer-mouse*
 *cookie*
 *cookie-bite*
 *copy*
 *copy-o*
 *copyright*
 *copyright-o*
 *couch*
 *cow*
 *credit-card*
 *credit-card-o*
 *crop*
 *crop-simple*
 *cross*
 *crosshairs*
 *crow*
 *crown*
 *crutch*
 *cube*
 *cubes*
 *cubes-stacked*
 *database*
 *delete-left*
 *democrat*
 *desktop*
 *dharmachakra*
 *diagram-next*
 *diagram-predecessor*
 *diagram-project*
 *diagram-successor*
 *diamond*
 *diamond-turn-right*
 *dice*
 *dice-d20*
 dice-d6











































 *dice-five*
 *dice-four*
 *dice-one*
 *dice-six*
 *dice-three*
 *dice-two*
 *disease*
 *display*
 *dna*
 *dog*
 *dolly*
 *door-closed*
 *door-open*
 *dove*
 *down-left-and-up-right-to-center*
 *down-long*
 *download*
 *dragon*
 *draw-polygon*
 *droplet*
 *droplet-slash*
 *drum*
 *drum-steelpan*
 *drumstick-bite*
 *dumbbell*
 *dumpster*
 *dumpster-fire*
 *dungeon*
 *ear-deaf*
 *ear-listen*
 *earth-africa*
 *earth-america*
 *earth-asia*
 *earth-europe*
 *earth-oceania*
 *egg*
 *eject*
 *elevator*
 *ellipsis*
 *ellipsis-vertical*
 *envelope*
 envelope-circle-check

 *envelope-o*
 *envelope-open*
 *envelope-open-o*
 *envelope-open-text*
 *envelopes-bulk*
 *eraser*
 *ethernet*
 *expand*
 *explosion*
 *eye*
 *eye-dropper*
 *eye-low-vision*
 *eye-o*
 *eye-slash*
 *eye-slash-o*
 *face-angry*
 *face-angry-o*
 *face-dizzy*
 *face-dizzy-o*
 *face-flushed*
 *face-flushed-o*
 *face-frown*
 *face-frown-o*
 *face-frown-open*
 *face-frown-open-o*
 *face-grimace*
 *face-grimace-o*
 *face-grin*
 *face-grin-beam*
 *face-grin-beam-o*
 *face-grin-beam-sweat*
 *face-grin-beam-sweat-o*
 *face-grin-hearts*
 *face-grin-hearts-o*
 *face-grin-o*
 *face-grin-squint*
 *face-grin-squint-o*
 *face-grin-squint-tears*
 *face-grin-squint-tears-o*
 *face-grin-stars*
 *face-grin-stars-o*

 *face-grin-tears*
 *face-grin-tears-o*
 *face-grin-tongue*
 *face-grin-tongue-o*
 *face-grin-tongue-squint*
 *face-grin-tongue-squint-o*
 *face-grin-tongue-wink*
 *face-grin-tongue-wink-o*
 *face-grin-wide*
 *face-grin-wide-o*
 *face-grin-wink*
 *face-grin-wink-o*
 *face-kiss*
 *face-kiss-beam*
 *face-kiss-beam-o*
 *face-kiss-o*
 *face-kiss-wink-heart*
 *face-kiss-wink-heart-o*
 *face-laugh*
 *face-laugh-beam*
 *face-laugh-beam-o*
 *face-laugh-o*
 *face-laugh-squint*
 *face-laugh-squint-o*
 *face-laugh-wink*
 *face-laugh-wink-o*
 *face-meh*
 *face-meh-blank*
 *face-meh-blank-o*
 *face-meh-o*
 *face-rolling-eyes*
 *face-rolling-eyes-o*
 *face-sad-cry*
 *face-sad-cry-o*
 *face-sad-tear*
 *face-sad-tear-o*
 *face-smile*
 *face-smile-beam*
 *face-smile-beam-o*
 *face-smile-o*
 *face-smile-wink*

 *face-smile-wink-o*
 *face-surprise*
 *face-surprise-o*
 *face-tired*
 *face-tired-o*
 *fan*
 *faucet*
 *faucet-drip*
 *fax*
 *feather*
 *feather-pointed*
 *ferry*
 *file*
 *file-arrow-down*
 *file-arrow-up*
 *file-audio*
 *file-audio-o*
 *file-circle-check*
 *file-circle-exclamation*
 *file-circle-minus*
 *file-circle-plus*
 *file-circle-question*
 *file-circle-xmark*
 *file-code*
 *file-code-o*
 *file-contract*
 *file-csv*
 *file-excel*
 *file-excel-o*
 *file-export*
 *file-fragment*
 *file-half-dashed*
 *file-image*
 *file-image-o*
 *file-import*
 *file-invoice*
 *file-invoice-dollar*
 *file-lines*
 *file-lines-o*
 *file-medical*
 *file-o*

 *file-pdf*
 *file-pdf-o*
 *file-pen*
 *file-powerpoint*
 *file-powerpoint-o*
 *file-prescription*
 *file-shield*
 *file-signature*
 *file-video*
 *file-video-o*
 *file-waveform*
 *file-word*
 *file-word-o*
 *file-zipper*
 *file-zipper-o*
 *fill*
 *fill-drip*
 *film*
 *filter*
 *filter-circle-dollar*
 *filter-circle-xmark*
 *fingerprint*
 *fire*
 *fire-burner*
 *fire-extinguisher*
 *fire-flame-curved*
 *fire-flame-simple*
 *fish*
 *fish-fins*
 *flag*
 *flag-checkered*
 *flag-o*
 *flag-usa*
 *flask*
 *flask-vial*
 *floppy-disk*
 *floppy-disk-o*
 *folder*
 *folder-closed*
 *folder-closed-o*
 *folder-minus*

 folder-o
 folder-open
 folder-open-o
 folder-plus
 folder-tree
 font
 font-awesome
 font-awesome-o
 football
 forward
 forward-fast
 forward-step
 frog
 futbol
 futbol-o
 gamepad
 gas-pump
 gauge
 gauge-high
 gauge-simple
 gauge-simple-high
 gavel
 gear
 gears
 gem
 gem-o
 genderless
 ghost
 gift
 gifts
 glass-water
 glass-water-droplet
 glasses
 globe
 golf-ball-tee
 gopuram
 graduation-cap
 grip
 grip-lines
 grip-lines-vertical
 grip-vertical
 group-arrows-rotate

 guitar
 gun
 hammer
 hamsa
 hand
 hand-back-fist
 hand-back-fist-o
 hand-dots
 hand-fist
 hand-holding
 hand-holding-dollar
 hand-holding-droplet
 hand-holding-hand
 hand-holding-heart
 hand-holding-medical
 hand-lizard
 hand-lizard-o
 hand-middle-finger
 hand-o
 hand-peace
 hand-peace-o
 hand-point-down
 hand-point-down-o
 hand-point-left
 hand-point-left-o
 hand-point-right
 hand-point-right-o
 hand-point-up
 hand-point-up-o
 hand-pointer
 hand-pointer-o
 hand-scissors
 hand-scissors-o
 hand-sparkles
 hand-spock
 hand-spock-o
 handcuffs
 hands
 hands-asl-interpreting
 hands-bound
 hands-bubbles


 hands-clapping
 hands-holding
 hands-holding-child
 hands-holding-circle
 hands-praying
 handshake
 handshake-angle
 handshake-o
 handshake-simple
 handshake-simple-slash
 handshake-slash
 hanukiah
 hard-drive
 hard-drive-o
 hat-cowboy
 hat-cowboy-side
 hat-wizard
 head-side-cough
 head-side-cough-slash
 head-side-mask
 head-side-virus
 heading
 headphones
 headphones-simple
 headset
 heart
 heart-circle-bolt
 heart-circle-check
 heart-circle-exclamation
 heart-circle-minus
 heart-circle-plus
 heart-circle-xmark
 heart-crack
 heart-o
 heart-pulse
 helicopter
 helicopter-symbol
 helmet-safety
 helmet-un
 hexagon-nodes
 hexagon-nodes-bolt
 highlighter










































	<i>hill-avalanche</i>
	<i>hill-rockslide</i>
	<i>hippo</i>
	<i>hockey-puck</i>
	<i>holly-berry</i>
	<i>horse</i>
	<i>horse-head</i>
	<i>hospital</i>
	<i>hospital-o</i>
	<i>hospital-user</i>
	<i>hot-tub-person</i>
	<i>hotdog</i>
	<i>hotel</i>
	<i>hourglass</i>
	<i>hourglass-end</i>
	<i>hourglass-half</i>
	<i>hourglass-half-o</i>
	<i>hourglass-o</i>
	<i>hourglass-start</i>
	<i>house</i>
	<i>house-chimney</i>
	<i>house-chimney-crack</i>
	<i>house-chimney-medical</i>
	<i>house-chimney-user</i>
	<i>house-chimney-window</i>
	<i>house-circle-check</i>
	<i>house-circle-exclamation</i>
	<i>house-circle-xmark</i>
	<i>house-crack</i>
	<i>house-fire</i>
	<i>house-flag</i>
	<i>house-flood-water</i>
	<i>house-flood-water-circle-arrow-right</i>
	<i>house-laptop</i>
	<i>house-lock</i>
	<i>house-medical</i>
	<i>house-medical-circle-check</i>
	<i>house-medical-circle-exclamation</i>
	<i>house-medical-circle-xmark</i>
	<i>house-medical-flag</i>
	<i>house-signal</i>

	<i>house-tsunami</i>
	<i>house-user</i>
	<i>hurricane</i>
	<i>i-cursor</i>
	<i>ice-cream</i>
	<i>icicles</i>
	<i>icons</i>
	<i>id-badge</i>
	<i>id-badge-o</i>
	<i>id-card</i>
	<i>id-card-clip</i>
	<i>id-card-o</i>
	<i>igloo</i>
	<i>image</i>
	<i>image-o</i>
	<i>image-portrait</i>
	<i>images</i>
	<i>images-o</i>
	<i>inbox</i>
	<i>indent</i>
	<i>industry</i>
	<i>infinity</i>
	<i>info</i>
	<i>italic</i>
	<i>jar</i>
	<i>jar-wheat</i>
	<i>jedi</i>
	<i>jet-fighter</i>
	<i>jet-fighter-up</i>
	<i>joint</i>
	<i>jug-detergent</i>
	<i>kaaba</i>
	<i>key</i>
	<i>keyboard</i>
	<i>keyboard-o</i>
	<i>khanda</i>
	<i>kit-medical</i>
	<i>kitchen-set</i>
	<i>kiwi-bird</i>
	<i>land-mine-on</i>
	<i>landmark</i>
	<i>landmark-dome</i>










































	<i>landmark-flag</i>
	<i>language</i>
	<i>laptop</i>
	<i>laptop-code</i>
	<i>laptop-file</i>
	<i>laptop-medical</i>
	<i>layer-group</i>
	<i>leaf</i>
	<i>left-long</i>
	<i>left-right</i>
	<i>lemon</i>
	<i>lemon-o</i>
	<i>life-ring</i>
	<i>life-ring-o</i>
	<i>lightbulb</i>
	<i>lightbulb-o</i>
	<i>lines-leaning</i>
	<i>link</i>
	<i>link-slash</i>
	<i>list</i>
	<i>list-check</i>
	<i>list-ol</i>
	<i>list-ul</i>
	<i>location-arrow</i>
	<i>location-crosshairs</i>
	<i>location-dot</i>
	<i>location-pin</i>
	<i>location-pin-lock</i>
	<i>lock</i>
	<i>lock-open</i>
	<i>locust</i>
	<i>lungs</i>
	<i>lungs-virus</i>
	<i>magnet</i>
	<i>magnifying-glass</i>
	<i>magnifying-glass-arrow-right</i>
	<i>magnifying-glass-chart</i>
	<i>magnifying-glass-dollar</i>
	<i>magnifying-glass-location</i>
	<i>magnifying-glass-minus</i>
	<i>magnifying-glass-plus</i>
	<i>map</i>

 *map-location*
 *map-location-dot*
 *map-o*
 *map-pin*
 *marker*
 *mars*
 *mars-and-venus*
 *mars-and-venus-burst*
 *mars-double*
 *mars-stroke*
 *mars-stroke-right*
 *mars-stroke-up*
 *martini-glass*
 *martini-glass-citrus*
 *martini-glass-empty*
 *mask*
 *mask-face*
 *mask-ventilator*
 *masks-theater*
 *mattress-pillow*
 *maximize*
 *medal*
 *memory*
 *menorah*
 *mercury*
 *message*
 *message-o*
 *meteor*
 *microchip*
 *microphone*
 *microphone-lines*
 *microphone-lines-slash*
 *microphone-slash*
 *microscope*
 *minimize*
 *mitten*
 *mobile*
 *mobile-button*
 *mobile-retro*
 *mobile-screen*
 *mobile-screen-button*

 *money-bill*
 *money-bill-1*
 *money-bill-1-o*
 *money-bill-1-wave*
 *money-bill-transfer*
 *money-bill-trend-up*
 *money-bill-wave*
 *money-bill-wheat*
 *money-bills*
 *money-check*
 *money-check-dollar*
 *monument*
 *moon*
 *moon-o*
 *mortar-pestle*
 *mosque*
 *mosquito*
 *mosquito-net*
 *motorcycle*
 *mound*
 *mountain*
 *mountain-city*
 *mountain-sun*
 *mug-hot*
 *mug-saucer*
 *music*
 *network-wired*
 *neuter*
 *newspaper*
 *newspaper-o*
 *not-equal*
 *note-sticky*
 *note-sticky-o*
 *notes-medical*
 *object-group*
 *object-group-o*
 *object-ungroup*
 *object-ungroup-o*
 *oil-can*
 *oil-well*
 *om*
 otter

 *outdent*
 *pager*
 *paint-roller*
 *paintbrush*
 *palette*
 *pallet*
 *panorama*
 *paper-plane*
 *paper-plane-o*
 *paperclip*
 *parachute-box*
 *paragraph*
 *passport*
 *paste*
 *paste-o*
 *pause*
 *paw*
 *peace*
 *pen*
 *pen-clip*
 *pen-fancy*
 *pen-nib*
 *pen-ruler*
 *pen-to-square*
 *pen-to-square-o*
 *pencil*
 *people-arrows*
 *people-carry-box*
 *people-group*
 *people-line*
 *people-pulling*
 *people-robbery*
 *people-roof*
 *pepper-hot*
 *person*
 *person-arrow-down-to-line*
 *person-arrow-up-from-line*
 *person-biking*
 *person-booth*
 *person-breastfeeding*
 *person-burst*










 *person-cane*
 *person-chalkboard*
 *person-circle-check*
 *person-circle-exclamation*
 *person-circle-minus*
 *person-circle-plus*
 *person-circle-question*
 *person-circle-xmark*
 *person-digging*
 *person-dots-from-line*
 *person-dress*
 *person-dress-burst*
 *person-drowning*
 *person-falling*
 *person-falling-burst*
 *person-half-dress*
 *person-harassing*
 *person-hiking*
 *person-military-pointing*
 *person-military-rifle*
 *person-military-to-person*
 *person-praying*
 *person-pregnant*
 *person-rays*
 *person-rifle*
 *person-running*
 *person-shelter*
 *person-skating*
 *person-skiing*
 *person-skiing-nordic*
 *person-snowboarding*
 *person-swimming*
 *person-through-window*
 *person-walking*
 *person-walking-arrow-loop-left*
 *person-walking-arrow-right*
 *person-walking-dashed-line-arrow-right*
 *person-walking-luggage*
 *person-walking-with-cane*
 *phone*
 *phone-flip*










































 *phone-slash*
 *phone-volume*
 *photo-film*
 *piggy-bank*
 *pills*
 *pizza-slice*
 *place-of-worship*
 *plane*
 *plane-arrival*
 *plane-circle-check*
 *plane-circle-exclamation*
 *plane-circle-xmark*
 *plane-departure*
 *plane-lock*
 *plane-slash*
 *plane-up*
 *plant-wilt*
 *plate-wheat*
 *play*
 *plug*
 *plug-circle-bolt*
 *plug-circle-check*
 *plug-circle-exclamation*
 *plug-circle-minus*
 *plug-circle-plus*
 *plug-circle-xmark*
 *podcast*
 *poo*
 *poo-storm*
 *poop*
 *power-off*
 *prescription*
 *prescription-bottle*
 *prescription-bottle-medical*
 *print*
 *pump-medical*
 *pump-soap*
 *puzzle-piece*
 *qrcode*
 *quote-left*
 *quote-right*










































 *radiation*
 *radio*
 *rainbow*
 *ranking-star*
 *receipt*
 *record-vinyl*
 *rectangle-ad*
 *rectangle-list*
 *rectangle-list-o*
 *rectangle-xmark*
 *rectangle-xmark-o*
 *recycle*
 *registered*
 *registered-o*
 *repeat*
 *reply*
 *reply-all*
 *republican*
 *restroom*
 *retweet*
 *ribbon*
 *right-from-bracket*
 *right-left*
 *right-long*
 *right-to-bracket*
 *ring*
 *road*
 *road-barrier*
 *road-bridge*
 *road-circle-check*
 *road-circle-exclamation*
 *road-circle-xmark*
 *road-lock*
 *road-spikes*
 *robot*
 *rocket*
 *rotate*
 *rotate-left*
 *rotate-right*
 *route*
 *rss*
 *rug*

 ruler
 ruler-combined
 ruler-horizontal
 ruler-vertical
 sack-dollar
 sack-xmark
 sailboat
 satellite
 satellite-dish
 scale-balanced
 scale-unbalanced
 scale-unbalanced-flip
 school
 school-circle-check
 school-circle-exclamation
 school-circle-xmark
 school-flag
 school-lock
 scissors
 screwdriver
 screwdriver-wrench
 scroll
 scroll-torah
 sd-card
 section
 seedling
 server
 shapes
 share
 share-from-square
 share-from-square-o
 share-nodes
 sheet-plastic
 shield
 shield-cat
 shield-dog
 shield-halved
 shield-heart
 shield-virus
 ship
 shirt

 shoe-prints
 shop
 shop-lock
 shop-slash
 shower
 shrimp
 shuffle
 shuttle-space
 sign-hanging
 signal
 signature
 signs-post
 sim-card
 sink
 sitemap
 skull
 skull-crossbones
 slash
 sleigh
 sliders
 smog
 smoking
 snowflake
 snowflake-o
 snowman
 snowplow
 soap
 socks
 solar-panel
 sort
 sort-down
 sort-up
 spa
 spaghetti-monster-flying
 spell-check
 spider
 spinner
 plotch
 spoon
 spray-can
 spray-can-sparkles
 square

 square-arrow-up-right
 square-binary
 square-caret-down
 square-caret-down-o
 square-caret-left
 square-caret-left-o
 square-caret-right
 square-caret-right-o
 square-caret-up
 square-caret-up-o
 square-check
 square-check-o
 square-envelope
 square-full
 square-full-o
 square-h
 square-minus
 square-minus-o
 square-nfi
 square-o
 square-parking
 square-pen
 square-person-confined
 square-phone
 square-phone-flip
 square-plus
 square-plus-o
 square-poll-horizontal
 square-poll-vertical
 square-root-variable
 square-rss
 square-share-nodes
 square-up-right
 square-virus
 square-xmark
 staff-snake
 stairs
 stamp
 stapler
 star
 star-and-crescent
 star-half

	<i>star-half-o</i>
	<i>star-half-stroke</i>
	<i>star-half-stroke-o</i>
	<i>star-o</i>
	<i>star-of-david</i>
	<i>star-of-life</i>
	<i>stethoscope</i>
	<i>stop</i>
	<i>stopwatch</i>
	<i>stopwatch-20</i>
	<i>store</i>
	<i>store-slash</i>
	<i>street-view</i>
	<i>strikethrough</i>
	<i>stroopwafel</i>
	<i>subscript</i>
	<i>suitcase</i>
	<i>suitcase-medical</i>
	<i>suitcase-rolling</i>
	<i>sun</i>
	<i>sun-o</i>
	<i>sun-plant-wilt</i>
	<i>superscript</i>
	<i>swatchbook</i>
	<i>synagogue</i>
	<i>syringe</i>
	<i>table</i>
	<i>table-cells</i>
	<i>table-cells-column-lock</i>
	<i>table-cells-large</i>
	<i>table-cells-row-lock</i>
	<i>table-cells-row-unlock</i>
	<i>table-columns</i>
	<i>table-list</i>
	<i>table-tennis-paddle-ball</i>
	<i>tablet</i>
	<i>tablet-button</i>
	<i>tablet-screen-button</i>
	<i>tablets</i>
	<i>tachograph-digital</i>
	<i>tag</i>

	<i>tags</i>
	<i>tape</i>
	<i>tarp</i>
	<i>tarp-droplet</i>
	<i>taxi</i>
	<i>teeth</i>
	<i>teeth-open</i>
	<i>temperature-arrow-down</i>
	<i>temperature-arrow-up</i>
	<i>temperature-empty</i>
	<i>temperature-full</i>
	<i>temperature-half</i>
	<i>temperature-high</i>
	<i>temperature-low</i>
	<i>temperature-quarter</i>
	<i>temperature-three-quarters</i>
	<i>tent</i>
	<i>tent-arrow-down-to-line</i>
	<i>tent-arrow-left-right</i>
	<i>tent-arrow-turn-left</i>
	<i>tent-arrows-down</i>
	<i>tents</i>
	<i>terminal</i>
	<i>text-height</i>
	<i>text-slash</i>
	<i>text-width</i>
	<i>thermometer</i>
	<i>thumbs-down</i>
	<i>thumbs-down-o</i>
	<i>thumbs-up</i>
	<i>thumbs-up-o</i>
	<i>thumbtack</i>
	<i>thumbtack-slash</i>
	<i>ticket</i>
	<i>ticket-simple</i>
	<i>timeline</i>
	<i>toggle-off</i>
	<i>toggle-on</i>
	<i>toilet</i>
	<i>toilet-paper</i>
	<i>toilet-paper-slash</i>
	<i>toilet-portable</i>

	<i>toilets-portable</i>
	<i>toolbox</i>
	<i>tooth</i>
	<i>torii-gate</i>
	<i>tornado</i>
	<i>tower-broadcast</i>
	<i>tower-cell</i>
	<i>tower-observation</i>
	<i>tractor</i>
	<i>traffic-light</i>
	<i>trailer</i>
	<i>train</i>
	<i>train-subway</i>
	<i>train-tram</i>
	<i>transgender</i>
	<i>trash</i>
	<i>trash-arrow-up</i>
	<i>trash-can</i>
	<i>trash-can-arrow-up</i>
	<i>trash-can-o</i>
	<i>tree</i>
	<i>tree-city</i>
	<i>triangle-exclamation</i>
	<i>trophy</i>
	<i>trowel</i>
	<i>trowel-bricks</i>
	<i>truck</i>
	<i>truck-arrow-right</i>
	<i>truck-droplet</i>
	<i>truck-fast</i>
	<i>truck-field</i>
	<i>truck-field-un</i>
	<i>truck-front</i>
	<i>truck-medical</i>
	<i>truck-monster</i>
	<i>truck-moving</i>
	<i>truck-pickup</i>
	<i>truck-plane</i>
	<i>truck-ramp-box</i>
	<i>tty</i>
	<i>turn-down</i>

	turn-up
	tv
	umbrella
	umbrella-beach
	underline
	universal-access
	unlock
	unlock-keyhole
	up-down
	up-down-left-right
	up-long
	up-right-and-down-left-from-center
	up-right-from-square
	upload
	user
	user-astronaut
	user-check
	user-clock
	user-doctor
	user-gear
	user-graduate
	user-group
	user-injured
	user-large
	user-large-slash
	user-lock
	user-minus
	user-ninja
	user-nurse
	user-o
	user-pen
	user-plus
	user-secret
	user-shield
	user-slash
	user-tag
	user-tie
	user-xmark
	users
	users-between-lines
	users-gear

	users-line
	users-rays
	users-rectangle
	users-slash
	users-viewfinder
	utensils
	van-shuttle
	vault
	vector-square
	venus
	venus-double
	venus-mars
	vest
	vest-patches
	vial
	vial-circle-check
	vial-virus
	vials
	video
	video-slash
	vihara
	virus
	virus-covid
	virus-covid-slash
	virus-slash
	viruses
	voicemail
	volcano
	volleyball
	volume-high
	volume-low
	volume-off
	volume-xmark
	vr-cardboard
	walkie-talkie
	wallet
	wand-magic
	wand-magic-sparkles
	wand-sparkles
	warehouse
	water
	water-ladder

	wave-square
	web-awesome
	weight-hanging
	weight-scale
	wheat-awn
	wheat-awn-circle-exclamation
	wheelchair
	wheelchair-move
	whiskey-glass
	wifi
	wind
	window-maximize
	window-maximize-o
	window-minimize
	window-minimize-o
	window-restore
	window-restore-o
	wine-bottle
	wine-glass
	wine-glass-empty
	worm
	wrench
	x-ray
	xmark
	xmarks-lines
	yin-yang

Appendix B List of brands

 42-group
 500px
 accessible-icon
 accusoft
 adn
 adversal
 affiliatetheme
 airbnb
 algolia
 alipay
 amazon
 amazon-pay
 amilia
 android
 angellist
 angrycreative
 angular
 app-store
 app-store-ios
 apper
 apple
 apple-pay
 artstation
 asymmetrik
 atlassian
 audible
 autoprefixer
 avianex
 aviato
 aws
 bandcamp
 battle-net
 behance
 bilibili
 bimobject
 bitbucket
 bitcoin
 bity
 black-tie

 blackberry
 blogger
 blogger-b
 bluesky
 bluetooth
 bluetooth-b
 bootstrap
 bots
 brave
 brave-reverse
 btc
 buffer
 buromobelexperte
 buy-n-large
 buysellads
 canadian-maple-leaf
 cc-amazon-pay
 cc-amex
 cc-apple-pay
 cc-diners-club
 cc-discover
 cc-jcb
 cc-mastercard
 cc-paypal
 cc-stripe
 cc-visa
 centercode
 centos
 chrome
 chromecast
 cloudflare
 cloudscale
 cloudsmith
 cloudversify
 cmplid
 codepen
 codiepie
 confluence
 connectdevelop
 contao
 cotton-bureau
 cpanel










































 creative-commons
 creative-commons-by
 creative-commons-nc
 creative-commons-nc-eu
 creative-commons-nc-jp
 creative-commons-nd
 creative-commons-pd
 creative-commons-pd-alt
 creative-commons-remix
 creative-commons-sa
 creative-commons-sampling
 creative-commons-sampling-plus
 creative-commons-share
 creative-commons-zero
 critical-role
 css
 css3
 css3-alt
 cuttlefish
 d-and-d
 d-and-d-beyond
 dailymotion
 dart-lang
 dashcube
 debian
 deezer
 delicious
 deploydog
 deskpro
 dev
 deviantart
 dhl
 diaspora
 digg
 digital-ocean
 discord
 discourse
 dochub
 docker
 draft2digital
 dribbble
 dropbox

 drupal
 dyalog
 earlybirds
 ebay
 edge
 edge-legacy
 elementor
 ello
 ember
 empire
 envira
 erlang
 ethereum
 etsy
 evernote
 expeditedssl
 facebook
 facebook-f
 facebook-messenger
 fantasy-flight-games
 fedex
 fedora
 figma
 files-pinwheel
 firefox
 firefox-browser
 first-order
 first-order-alt
 firstdraft
 flickr
 flipboard
 flutter
 fly
 font-awesome
 fonticons
 fonticons-fi
 fort-awesome
 fort-awesome-alt
 forumbee
 foursquare
 free-code-camp
 freebsd

 fulcrum
 galactic-republic
 galactic-senate
 get-pocket
 gg
 gg-circle
 git
 git-alt
 github
 github-alt
 gitkraken
 gitlab
 gitter
 glide
 glide-g
 gofore
 golang
 goodreads
 goodreads-g
 google
 google-drive
 G Pay
 google-play
 google-plus
 google-plus-g
 google-scholar
 google-wallet
 gratipay
 grav
 gripfire
 grunt
 guilded
 gulp
 hacker-news
 hackerrank
 hashnode
 hips
 hire-a-helper
 hive
 hooli
 hornbill
 hotjar

 houzz
 html5
 hubspot
 ideal
 imdb
 instagram
 instalod
 intercom
 internet-explorer
 invision
 ioxhost
 itch-io
 itunes
 itunes-note
 java
 jedi-order
 jenkins
 jira
 joget
 joomla
 js
 jsfiddle
 jxl
 kaggle
 keybase
 keycdn
 kickstarter
 kickstarter-k
 korvue
 laravel
 lastfm
 leanpub
 less
 letterboard
 line
 linkedin
 linkedin-in
 linode
 linux
 lyft
 magento
 mailchimp

 mandalorian
 markdown
 mastodon
 maxcdn
 mdb
 medapps
 medium
 medrt
 meetup
 megaport
 mendeley
 meta
 microblog
 microsoft
 mintbit
 mix
 mixcloud
 mixer
 mizuni
 modx
 monero
 napster
 neos
 nfc-directional
 nfc-symbol
 nimblr
 node
 node-js
 npm
 ns8
 nutritionix
 octopus-deploy
 odnoklassniki
 odysee
 old-republic
 opencart
 openid
 opensuse
 opera
 optin-monster
 orcid
 osi

 padlet
 page4
 pagelines
 palfed
 patreon
 paypal
 perbyte
 periscope
 phabricator
 phoenix-framework
 phoenix-squadron
 php
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 qq
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 rebel
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 salesforce
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 screenpal
 scribd
 searchengin
 sellcast
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 servicestack
 shirtsinbulk
 shoelace
 shopify
 shopware
 signal-messenger
 simplybuilt
 sistrix
 sith
 sitrox
 sketch
 skyatlas
 skype
 slack
 slideshare
 snapchat
 soundcloud
 sourcetree
 space-awesome
 speakap
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 square-behance
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 square-facebook
 square-font-awesome
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 square-git

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	<i>stumbleupon</i>
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	<i>symfony</i>
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	<i>the-red-yeti</i>
	<i>themeco</i>
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	<i>youtube</i>
	<i>zhihu</i>