

BRIAR Commands

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Chapter 1

Main Page

1.1 Briar Commands

Briar has a number of commands, each with its own set of parameters and use cases, which can be run on the command line. The commands available to BRIAR are documented in the links below:

1.2 Command List

Chapter 2

BRIAR CLI cmd: Database-list

2.1 Database-list

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS] database_name

List the entries in a database. This will contain entry names associated and may additional metadata about the media or the subject.

2.2 Options

- `--version` show program's version number and exit
- `-h`, `--help` show this help message and exit
- `-v`, `--verbose` Print out more program information.
- `-o CSV_PATH`, `--out-csv=CSV_PATH` Output a csv listing here.

2.2.1 Connection Options:

Control the connection to the BRIAR service.

- `--max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT`, `--port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `--progress` Display progress of job in the form of a progress bar

Created by David Bolme - bolmeds@ornl.gov

Chapter 3

BRIAR CLI cmd: Database-names

3.1 Database-names

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS]

List the databases that have been created on the service.

3.2 Options

- `--version` show program's version number and exit
- `-h, --help` show this help message and exit
- `-v, --verbose` Print out more program information.
- `-o CSV_PATH, --out-csv=CSV_PATH` Output a csv listing here.

3.2.1 Connection Options:

Control the connection to the BRIAR service.

- `--max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT, --port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `--progress` Display progress of job in the form of a progress bar

Created by David Bolme - bolmeds@ornl.gov

Chapter 4

BRIAR CLI cmd: Detect

4.1 Detect

Usage: `/home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py` command [OPTIONS] [image] [video] [image_directory] [...]

Run detection on a collection of images and videos. This command scans media and directories from the commandline for known media types and runs detection and tracking on those files. Results are saved as csv files in the output directory.

4.2 Options

- `-version` show program's version number and exit
- `-h`, `-help` show this help message and exit
- `-v`, `-verbose` Print out more program information.
- `-o OUT_DIR`, `-out-dir=OUT_DIR` Output Directory: defaults to `media_directory`.
- `-n MAX_IMAGES`, `-max-images=MAX_IMAGES` Process N images per video and then stop.
- `-maximum-size=MAX_SIZE` If too large, images will be scaled to have this maximum size. Default=1920

4.2.1 Connection Options:

Control the connection to the BRIAR service.

- `-max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to `-1` for unlimited. Default=67108864
- `-p PORT`, `-port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `-progress` Display progress of job in the form of a progress bar

4.2.2 Detector Options:

Configuration for the detectors.

- `--detect-algorithm=DETECT_ALGORITHM_ID` Select the detection algorithm to use.
- `--detect-best` Return only the 'best' highest scoring face/body in the image.
- `--detect-face-thresh=DETECT_FACE_THRESH` The threshold for face detection.
- `--detect-body-thresh=DETECT_BODY_THRESH` The threshold for body detection.
- `--detect-face-min-height=DETECT_FACE_MIN_HEIGHT` Limit the size of the smallest face detections.
- `--detect-body-min-height=DETECT_BODY_MIN_HEIGHT` Limit the size of the smallest body detections.
- `--detect-metadata` Enable processing for additional metadata: landmarks, pose, demographics, etc.
- `-m MODALITY, --modality=MODALITY` Choose a biometric modality. Default=face

4.2.3 Tracking Options:

Configuration for the tracking algorithm.

- `--tracking-algorithm=TRACKING_ALGORITHM_ID` Select the detection algorithm to use.
- `--tracking-disable` Disable tracking and process videos on a frame by frame basis.
- `--tracking-threshold=TRACKING_THRESH` The threshold for face detection.

4.2.4 Media Options:

Common Media Handling Options.

Created by David Bolme - bolmeds@ornl.gov

Chapter 5

BRIAR CLI cmd: Enroll

5.1 Enroll

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS] [image] [image_↵ directory] [video] [...]

Run detection and extraction on media files and enroll templates into a database. Enroll is the primary function used to scan data for experiments. This function can be used to do this manually or to test enrollment functionality.

5.2 Options

- `--version` show program's version number and exit
- `-h, --help` show this help message and exit
- `-v, --verbose` Print out more program information.
- `-e ENROLL_CSV, --enroll-csv=ENROLL_CSV` Save a log of the enrollments.
- `-o OUT_DIR, --out-dir=OUT_DIR` Output Directory: defaults to `media_directory`.
- `-n MAX_IMAGES, --max-images=MAX_IMAGES` Process N images per video and then stop.
- `--maximum-size=MAX_SIZE` If too large, images will be scaled to have this maximum size. Default=1920
- `-d, --use-detections` Use saved detections to perform the extract. Default=False
- `-D DATABASE, --database=DATABASE` Select the database to enroll into.
- `-E ENTRY_ID, --entry=ENTRY_ID` Select the entry_id (subject_id or media_id) within the database.
- `-T ENTRY_TYPE, --entry-type=ENTRY_TYPE` Choose an enrollment mode: subject or media. Default=subject
- `-N SUBJECT_NAME, --name=SUBJECT_NAME` Enroll detected faces into a database.
- `-t, --use-templates` Use saved templates to perform the extract. Default=False
- `-w, --enroll-whole-image` Do not run autodetect or use existing detections and generate a template from the whole image.

5.2.1 Media Options:

Common Media Handling Options.

5.2.2 Detector Options:

Configuration for the detectors.

- `-detect-algorithm=DETECT_ALGORITHM_ID` Select the detection algorithm to use.
- `-detect-best` Return only the 'best' highest scoring face/body in the image.
- `-detect-face-thresh=DETECT_FACE_THRESH` The threshold for face detection.
- `-detect-body-thresh=DETECT_BODY_THRESH` The threshold for body detection.
- `-detect-face-min-height=DETECT_FACE_MIN_HEIGHT` Limit the size of the smallest face detections.
- `-detect-body-min-height=DETECT_BODY_MIN_HEIGHT` Limit the size of the smallest body detections.
- `-detect-metadata` Enable processing for additional metadata: landmarks, pose, demographics, etc.
- `-m MODALITY, -modality=MODALITY` Choose a biometric modality. Default=face

5.2.3 Tracking Options:

Configuration for the tracking algorithm.

- `-tracking-algorithm=TRACKING_ALGORITHM_ID` Select the detection algorithm to use.
- `-tracking-disable` Disable tracking and process videos on a frame by frame basis.
- `-tracking-threshold=TRACKING_THRESH` The threshold for face detection.

5.2.4 Extract Options:

Configuration for the feature extractor.

- `-extract-algorithm-id=EXTRACT_ALGORITHM_ID` Select the extraction algorithm to use.
- `-extract-debug` Enable server side debugging for this call.
- `-f, -extract-whole-image` Create templates from the full image - overwrites the '-d' option. Default=False

5.2.5 Enrollment Options:

Configuration for enrollment.

- `-enroll-debug` Enable server side debugging for this call.

5.2.6 Connection Options:

Control the connection to the BRIAR service.

- `-max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT, -port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `-progress` Display progress of job in the form of a progress bar

Chapter 6

BRIAR CLI cmd: Extract

6.1 Extract

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS] [image] [image_↔ directory] [video] [...]

Run extraction on a collection of media or detections. Saves out template files as serialized protobuf messages.

6.2 Options

- `--version` show program's version number and exit
- `-h`, `--help` show this help message and exit
- `-v`, `--verbose` Print out more program information.
- `-o OUT_DIR`, `--out-dir=OUT_DIR` Output Directory: defaults to `media_directory`.
- `-n MAX_IMAGES`, `--max-images=MAX_IMAGES` Process at N images and then stop.
- `--track` Set this flag to enable tracking of detections, instead of just frame-wise detections
- `--detections_dir=DETECTIONS_DIR` Directory to read detections from. Unspecified means same folder(s) as media.
- `-d`, `--use-detections` Use saved detections to perform the extract. Default=False

6.2.1 Detector Options:

Configuration for the detectors.

- `--detect-algorithm=DETECT_ALGORITHM_ID` Select the detection algorithm to use.
- `--detect-best` Return only the 'best' highest scoring face/body in the image.
- `--detect-face-thresh=DETECT_FACE_THRESH` The threshold for face detection.
- `--detect-body-thresh=DETECT_BODY_THRESH` The threshold for body detection.
- `--detect-face-min-height=DETECT_FACE_MIN_HEIGHT` Limit the size of the smallest face detections.
- `--detect-body-min-height=DETECT_BODY_MIN_HEIGHT` Limit the size of the smallest body detections.
- `--detect-metadata` Enable processing for additional metadata: landmarks, pose, demographics, etc.
- `-m MODALITY`, `--modality=MODALITY` Choose a biometric modality. Default=face

6.2.2 Tracking Options:

Configuration for the tracking algorithm.

- `-tracking-algorithm=TRACKING_ALGORITHM_ID` Select the detection algorithm to use.
- `-tracking-disable` Disable tracking and process videos on a frame by frame basis.
- `-tracking-threshold=TRACKING_THRESH` The threshold for face detection.

6.2.3 Extract Options:

Configuration for the feature extractor.

- `-extract-algorithm-id=EXTRACT_ALGORITHM_ID` Select the extraction algorithm to use.
- `-extract-debug` Enable server side debugging for this call.
- `-f, -extract-whole-image` Create templates from the full image - overwrites the '-d' option. Default=False

6.2.4 Connection Options:

Control the connection to the BRIAR service.

- `-max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT, -port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `-progress` Display progress of job in the form of a progress bar

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Chapter 7

BRIAR CLI cmd: Finalize

7.1 Finalize

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS] ['[database_name]']

Finalize the given database and save to disk. This could take a long time and may build complex datastructures. After a database is finalized it will not be modified

7.2 Options

- `--version` show program's version number and exit
- `-h`, `--help` show this help message and exit
- `-D DATABASE`, `--database=DATABASE` Select the database to enroll into.

7.2.1 Connection Options:

Control the connection to the BRIAR service.

- `--max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT`, `--port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `--progress` Display progress of job in the form of a progress bar

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Chapter 8

BRIAR CLI cmd: Search

8.1 Search

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS] [image] [image_↔ directory] [video] [...]

Run a 1:N search against a database. This using a probe entry as input and finds the top matches in a gallery database.

8.2 Options

- `--version` show program's version number and exit
- `-h`, `--help` show this help message and exit
- `-v`, `--verbose` Print out more program information.
- `--notrack` Set this flag to disable tracking of detections and perform just frame-wise detections
- `-d`, `--use-detections` Use saved detections to perform the extract. Default=False
- `-n MAX_IMAGES`, `--max-images=MAX_IMAGES` Process N images per video and then stop.
- `--maximum-size=MAX_SIZE` If too large, images will be scaled to have this maximum size. Default=1920

8.2.1 Search Options:

Configuration for database search.

- `-o OUT_DIR`, `--out-dir=OUT_DIR` Save the search results.
- `--output-type=OUTPUT_TYPE` Choose an enrollment mode: subject or media. Default=briar
- `--database=SEARCH_DATABASE` Select the database to search.
- `--search-threshold=SEARCH_THRESHOLD` Set the maximum threshold for a match.
- `--max-results=MAX_RESULTS` Set the maximum number of search results returned for each face.
- `-t`, `--use-templates` Use saved templates to perform the extract. Default=False
- `-w`, `--enroll-whole-image` Do not run autodetect or use existing detections and generate a template from the whole image.

8.2.2 Detector Options:

Configuration for the detectors.

- `--detect-algorithm=DETECT_ALGORITHM_ID` Select the detection algorithm to use.
- `--detect-best` Return only the 'best' highest scoring face/body in the image.
- `--detect-face-thresh=DETECT_FACE_THRESH` The threshold for face detection.
- `--detect-body-thresh=DETECT_BODY_THRESH` The threshold for body detection.
- `--detect-face-min-height=DETECT_FACE_MIN_HEIGHT` Limit the size of the smallest face detections.
- `--detect-body-min-height=DETECT_BODY_MIN_HEIGHT` Limit the size of the smallest body detections.
- `--detect-metadata` Enable processing for additional metadata: landmarks, pose, demographics, etc.
- `-m MODALITY, --modality=MODALITY` Choose a biometric modality. Default=face

8.2.3 Tracking Options:

Configuration for the tracking algorithm.

- `--tracking-algorithm=TRACKING_ALGORITHM_ID` Select the detection algorithm to use.
- `--tracking-disable` Disable tracking and process videos on a frame by frame basis.
- `--tracking-threshold=TRACKING_THRESH` The threshold for face detection.

8.2.4 Extract Options:

Configuration for the feature extractor.

- `--extract-algorithm-id=EXTRACT_ALGORITHM_ID` Select the extraction algorithm to use.
- `--extract-debug` Enable server side debugging for this call.
- `-f, --extract-whole-image` Create templates from the full image - overwrites the '-d' option. Default=False

8.2.5 Connection Options:

Control the connection to the BRIAR service.

- `--max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT, --port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `--progress` Display progress of job in the form of a progress bar

8.2.6 Media Options:

Common Media Handling Options.

Created by David Bolme - bolmeds@ornl.gov

Chapter 9

BRIAR CLI cmd: Sigset-enroll

9.1 Sigset-enroll

Usage: `/home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py` command [OPTIONS] <input>.xml dataset_dir

Reads a sigset and then enrolls the media into a specified database. This is the primary interface for enrolling data for experiments. Experiments are typically run by enrolling a probe set and a gallery set and then calling search or verify queries.

9.2 Options

- `-version` show program's version number and exit
- `-h`, `--help` show this help message and exit
- `-v`, `--verbose` Print out more program information.
- `-o CSV_PATH`, `--output-csv=CSV_PATH` Save the sigset info to a csv file.
- `-d`, `--use-detections` Use saved detections to perform the extract. Default=False
- `-D DATABASE`, `--database=DATABASE` Select the database to enroll into.
- `-E ENTRY_ID`, `--entry=ENTRY_ID` Select the entry_id (subject_id or media_id) within the database.
- `-T ENTRY_TYPE`, `--entry-type=ENTRY_TYPE` Choose an enrollment mode: subject or media. Default=subject
- `-N SUBJECT_NAME`, `--name=SUBJECT_NAME` Enroll detected faces into a database.
- `-t`, `--use-templates` Use saved templates to perform the extract. Default=False
- `-w`, `--enroll-whole-image` Do not run autodetect or use existing detections and generate a template from the whole image.

9.2.1 Connection Options:

Control the connection to the BRIAR service.

- `--max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT, --port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `--progress` Display progress of job in the form of a progress bar

9.2.2 Detector Options:

Configuration for the detectors.

- `--detect-algorithm=DETECT_ALGORITHM_ID` Select the detection algorithm to use.
- `--detect-best` Return only the 'best' highest scoring face/body in the image.
- `--detect-face-thresh=DETECT_FACE_THRESH` The threshold for face detection.
- `--detect-body-thresh=DETECT_BODY_THRESH` The threshold for body detection.
- `--detect-face-min-height=DETECT_FACE_MIN_HEIGHT` Limit the size of the smallest face detections.
- `--detect-body-min-height=DETECT_BODY_MIN_HEIGHT` Limit the size of the smallest body detections.
- `--detect-metadata` Enable processing for additional metadata: landmarks, pose, demographics, etc.
- `-m MODALITY, --modality=MODALITY` Choose a biometric modality. Default=face

9.2.3 Tracking Options:

Configuration for the tracking algorithm.

- `--tracking-algorithm=TRACKING_ALGORITHM_ID` Select the detection algorithm to use.
- `--tracking-disable` Disable tracking and process videos on a frame by frame basis.
- `--tracking-threshold=TRACKING_THRESH` The threshold for face detection.

9.2.4 Extract Options:

Configuration for the feature extractor.

- `--extract-algorithm-id=EXTRACT_ALGORITHM_ID` Select the extraction algorithm to use.
- `--extract-debug` Enable server side debugging for this call.
- `-f, --extract-whole-image` Create templates from the full image - overwrites the '-d' option. Default=False

9.2.5 Enrollment Options:

Configuration for enrollment.

- `--enroll-debug` Enable server side debugging for this call.

Chapter 10

BRIAR CLI cmd: Sigset-stats

10.1 Sigset-stats

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS] <input>.xml

Convert a sigset to a csv file. This function reads in an xml sigset and converts it to a csv file. Statistics may also be reported for informational purposes.

10.2 Options

- `--version` show program's version number and exit
- `-h, --help` show this help message and exit
- `-v, --verbose` Print out more program information.
- `-o CSV_PATH, --output-csv=CSV_PATH` Save the sigset info to a csv file.
- `-m DATABASE_MODE, --database-mode=DATABASE_MODE` Save the sigset info to a csv file.

Created by David Bolme - bolmeds@ornl.gov

Chapter 11

BRIAR CLI cmd: Status

11.1 Status

Usage: /home/2r6/Projects/briar/briar-api/lib/python/briar/__main__.py command [OPTIONS]

Check the server status and display algorithm and version information. This is a good first check to insure that a connection is established and that the service is ready to accept commands.

11.2 Options

- `--version` show program's version number and exit
- `-h`, `--help` show this help message and exit
- `-v`, `--verbose` Print out more program information.

11.2.1 Connection Options:

Control the connection to the BRIAR service.

- `--max-message-size=MAX_MESSAGE_SIZE` Maximum GRPC message size. Set to -1 for unlimited. Default=67108864
- `-p PORT`, `--port=PORT` The port used for the recognition service. Default=0.0.0.0:50051
- `--progress` Display progress of job in the form of a progress bar

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