



FullContact

LOCATION

18th & Blake
(LoDo)

Near many great
restaurants,
breweries, and
bars.

Right next to Union
Station for easy
travel.

IDEAL TEAM SIZE

2-3

Advanced OCR

About Us:

FullContact is solving the world's contact information problem. We're a 2011 TechStars Boulder graduate that provides APIs and applications that allow businesses and consumers to keep their contact information up to date automatically. We're a team of 200+ people located across the globe in Denver, Texas, Latvia, and India, headquartered in LoDo (downtown Denver) down the street from Union Station.

Background:

FullContact has a stated mission to become the premier contact management system of record for individuals and businesses. This is done by keeping all their contact information in one place and automatically up to date and making this contact information available everywhere they need it. FullContact has developed a human based image transcription service that processes thousands of business cards per day, but this takes time and is costly. We want to augment our human transcription with an OCR system to make the whole system faster and more affordable.

Project:

Deliver a solution that improves upon standard open source (OCR libraries) to create an ultra accurate scanning solution to prime our human card transcription system. The goal will be to replace, or minimize the need for human transcription or verification.

The project will include image manipulation: scoring of image sharpness, rotation of image, image cropping, and/or color manipulation for optimal scans. The project will also include use of open source OCR libraries such as Tesseract OCR for character recognition. Machine Learning (such as Keras or TensorFlow) for identifying and classifying data elements on a card may be used.

Our applications are used by millions of real people every day to add and update contact data in their address books. The output of this project may be used by our real production systems!

Solution:

The ideal solution will be able to:

- Identify images that are too blurry, or do not have any text on them and discard them
- Normalize, sharpen, and prepare images for the best possible OCR outcome, perhaps by splitting up text chunks and recombining them later
- Optimize transcription such that majority of images at a maximum may only require quick human verification.
- Optionally identify the language of the text (English, Spanish, French etc...)
- Optionally identify the likely location (country) the image belongs to (by inspecting address data)
- This feature could be used to decide which algorithms process it, or what kind of human fallback is used for transcription or verification

Summer Internship:

A limited number of paid summer internships may be available upon course completion.

Required Skills:

- Willing and eager to solve hard problems
- Enjoy working with algorithms

Useful Skills:

- Machine learning (artificial intelligence) algorithms
- Linear algebra, graphics processing and/or image manipulation
- Natural language processing