



TALENT TRACE

Simplified applicant matching to multi-level jobs

Elaine Fisher, Steve Pittard, Rebecca Thomas, & Vicki Hertzberg



Save time and apply to the **right CRC job level**

Find the appropriate CRC level, receive tailored advice on the training, skills, and competencies for this level in 5 minutes.

Find My CRC Level

 Bachelor's Degree in Social Work

✓ 1-year full-time equivalent



Clinical Research Coordinator II

MOTIVATION – CLINICAL TRIALS

NIH U.S. National Library of Medicine

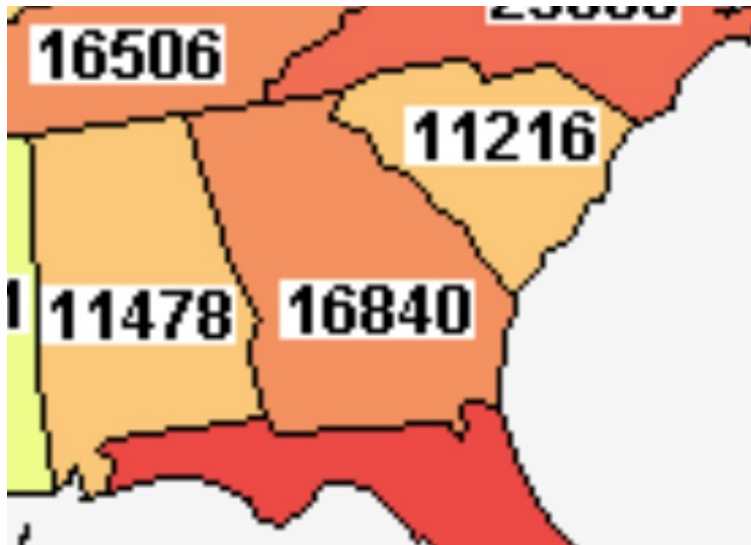
ClinicalTrials.gov

481,599 Studies World Wide (Not all Are Active)

16,840 Studies in Georgia (Not all Are Active)

Clinical research coordinators: Key components of an efficient clinical trial unit

[Vincenzina Mora](#),^{a,1} [Stefania Colantuono](#),^{a,*,1} [Caterina Fanali](#),^a [Alessia Leonetti](#),^a [Giulia Wlderck](#),^a [Maria Antonia Pirro](#),^a [Francesca Maria Calà Palmarino](#),^a [Roberta Savini](#),^a [Gianluca Ianiro](#),^b [Antonio Gasbarrini](#),^b and SC&RN group², on behalf of



- Protocol Development
- Regulatory Compliance
- Participant Recruitment
- Data Collection and Management
- Communication and Collaboration
- Monitoring and Quality Assurance
- Safety Reporting
- Study Closure and Reporting



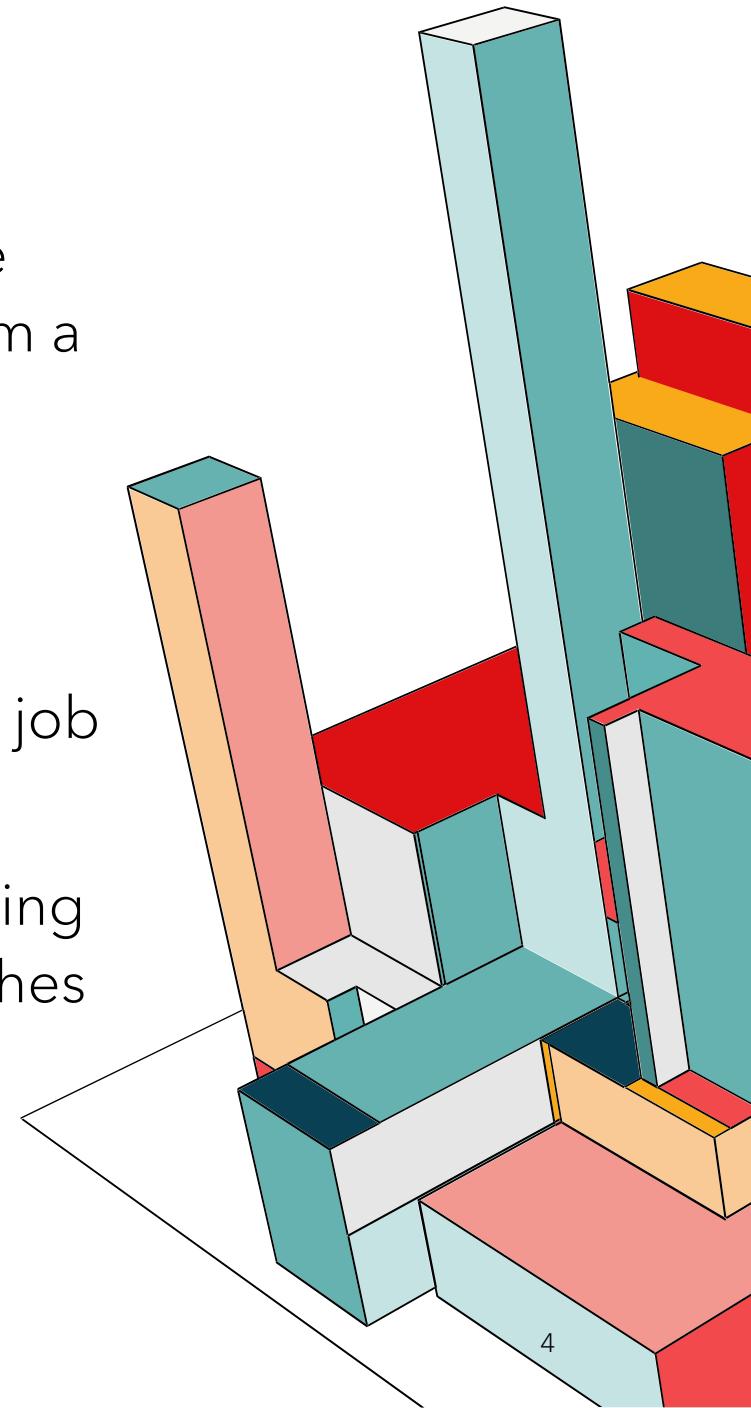
PROBLEM

Hiring Challenge: 52% of talent acquisition leaders report the hardest part of recruitment is finding the 'right candidate' from a large and diverse applicant pool.

The problem is 2-fold:

1. **Applicant Uncertainty**: Candidates are unsure about which job level is the best fit for them (CRC 1-4) .
2. **Recruiter Effort**: HR recruiters spend significant time matching applicants to job positions using imprecise semantic searches or unsophisticated AI screening methods.

Hiring the wrong applicant results in frustration, attrition, and delayed project initiation and progress.





SOLUTION: TALENT TRACE

An Advanced Decision-Based Tool for Accurate Candidate to Position Matching in Multi-Level Jobs

TARGET AUDIENCE

Applicants: App designed to assist candidates in identifying the most suitable job level based on their qualifications.

HR Recruiters: Advanced Decision Tool to enhance matchmaking.

COST SAVINGS

Reduces resume screening time by 15-fold

USABILITY

Applicants: App returns a CRC position-level based on self-reported education & experiences.

HR Recruiters: Seamless integration into an existing Applicant Tracking Systems (ATS) for an unbiased and intuitive candidate score (0-100).



TALENT TRACE SECRETS!

What Do We Use ?

Decision Trees ?

BERT ?

LLM ?

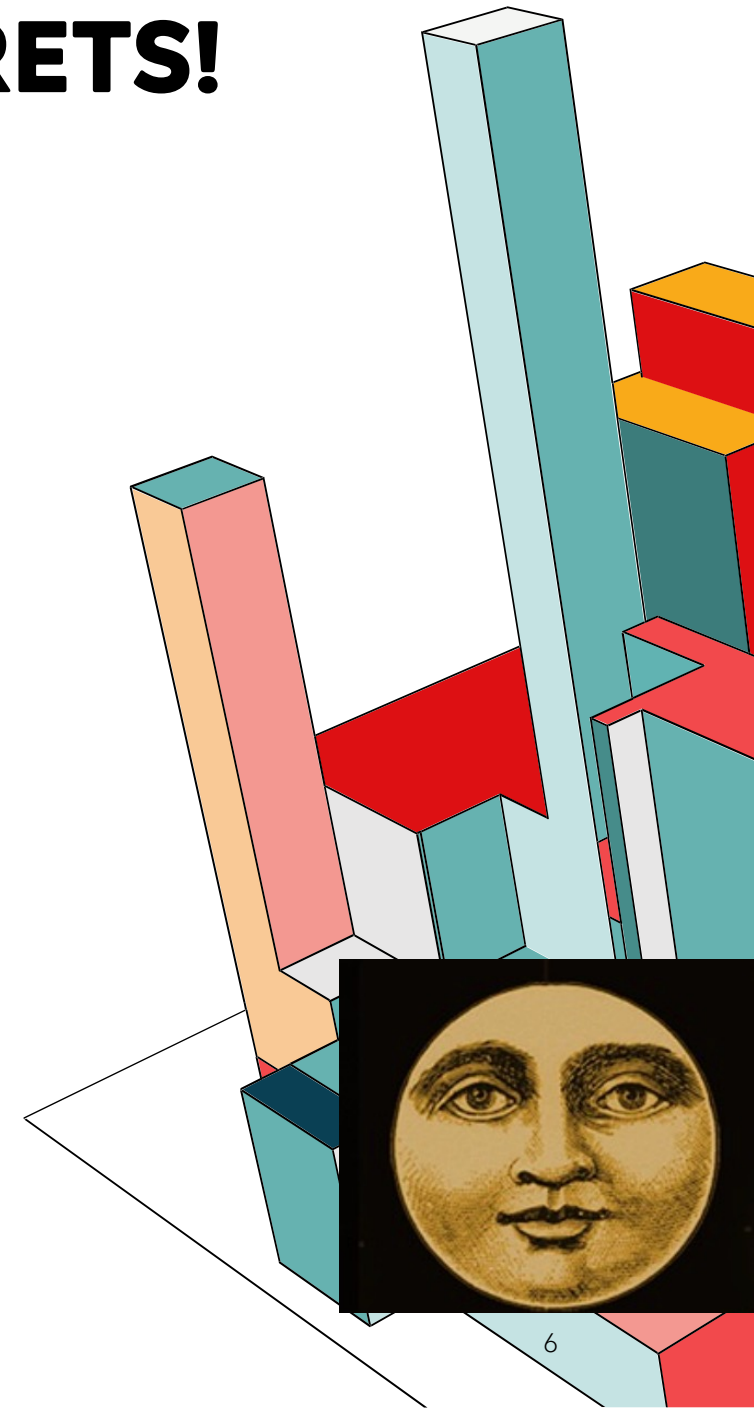
Ensemble Methods ?

Oujia Board ?

Astrology ?

All Of The Above?

We Tried Some Things !





Competence-Level Prediction and Resume & Job Description Matching Using Context-Aware Transformer Models

Changmao Li[♠], Elaine Fisher[◇], Rebecca Thomas[♡],
Steve Pittard[♣], Vicki Hertzberg[◇], Jinho D. Choi[♠]

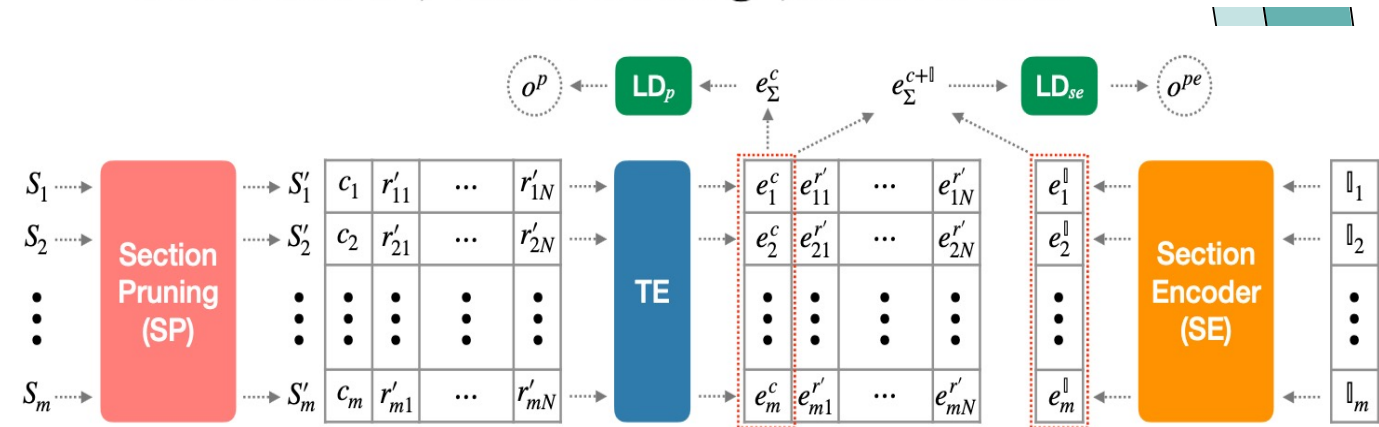


Figure 2: The context-aware model using section pruning (§4.1.2) and section encoding (§4.1.4).

	DEV	TST	δ
W_{r+b}	76.24 (± 1.08)	77.70 (± 0.59)	-
$P \oplus I \oplus J$	74.73 (± 0.54)	75.60 (± 1.07)	-2.1
$P \oplus I \oplus J \oplus A$	75.36 (± 0.57)	77.25 (± 0.87)	-0.5
$P \oplus I \oplus J \oplus A \oplus E$	76.42 (± 0.22)	77.58 (± 0.95)	-0.1
$C \oplus I \oplus J$	73.85 (± 0.87)	74.65 (± 1.87)	-3.1
$C \oplus I \oplus J \oplus A$	76.99 (± 1.10)	79.20 (± 0.26)	1.5
$C \oplus I \oplus J \oplus A \oplus E$	76.20 (± 0.96)	78.49 (± 0.74)	0.8



RESUMES

Unstructured Data, Many Formats, Not Easy to Parse for Years of Experience

Non-standard Degree names, Medical Degree Requirements are different across the globe

Non-standard Professional Certificates

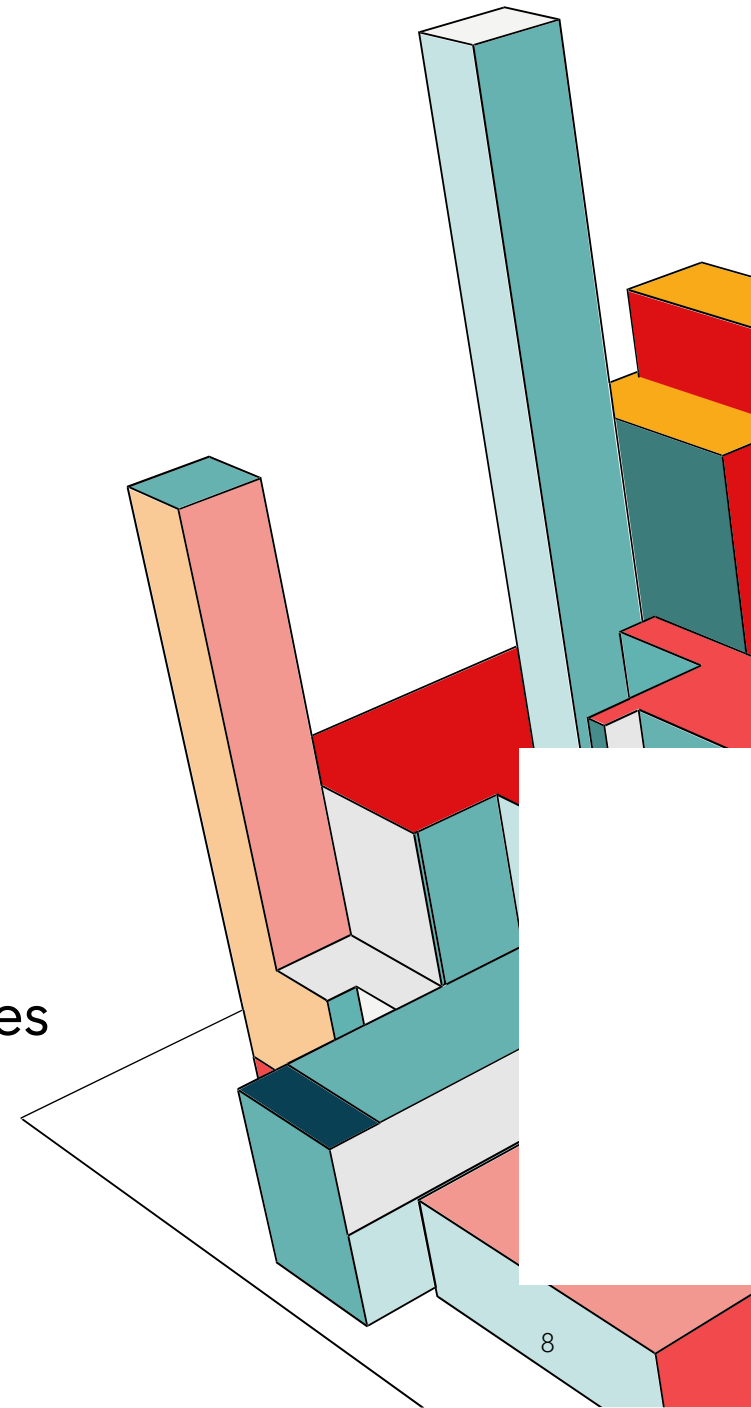
If the Parser Gets It Wrong Then a That's It

FLIP THE SCRIPT

Give The Applicant a Private Experience Pre-HR

False Positives Still Possible But Talent Trace Provides Accurate Level Estimates

Gives Info On Levelling Up



1

Education

1 - 3 minute

2

Healthcare Setting

Less than 1 minute

3

Clinical Research

Less than 1 minute

4

Laboratory Research

Less than 1 minute

5

Review & Submit**Education**

✓ Bachelor's Degree in Biomedical Science

**Certifications**

✓ Certified Laboratory Technician

✓ Medical Assisting

✓ Clinical Research Associate Graduate Certificate

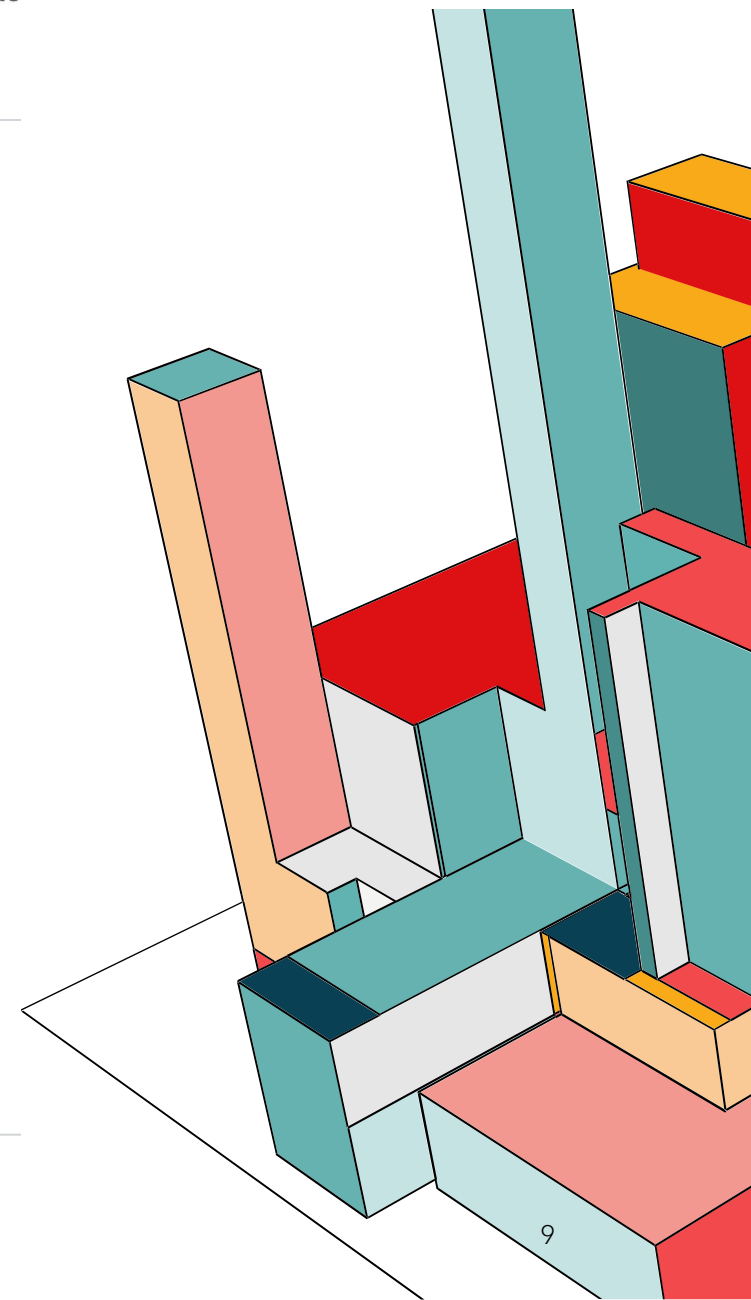
✓ Clinical Research Certificate

**Clinical Role**

✓ More than 2 years or more

**Laboratory Research**

✓ 3 years to less than 4 years





SOLUTION: TALENT TRACE

An Advanced Decision-Based Tool for Accurate Candidate to Position Matching in Multi-Level Jobs

CURRENT ACCURACIES

Anticipated in the 90 plus % range
(pending full testing)

COST SAVINGS

Reduces resume screening time by 15-fold

USABILITY

Applicants: App returns a CRC position-level based on self-reported education & experiences.

HR Recruiters: Seamless integration into an existing Applicant Tracking Systems (ATS) for an unbiased and intuitive candidate score (0-100).

MVP

- Minimum Viable Product (v1.0)
Available Now!
Test on 1,000 Resumes
- Next Steps
Fund Raising
Pilot Projects (Duke, Vanderbilt)
- Community Building
 - Locate Industry Partner
 - Incorporate Business
 - SBIR
 - More Customer Discovery

