CLASSIFLY: CLASSIFICATION OF EXPERTS BY THEIR EXPERTISE ON THE FLY

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Motivation

The needs of finding an expert is very common especially for human resources in large organization like universities, research centers, companies, hospitals etc. For example, a student is looking for potential postgraduate supervisor in an academic setting, a patient is seeking for suitable specialist in a medical setting, a journal editor looking for reviewer and so forth.

In this paper, we focus on the classification of experts which is commonly used to improve the look up for expert. Classification allows grouping of experts into smaller subsets, for example by their expertise. Once an expert is classified, the information can be used in many ways like expert profiling, expert search filtering, experts grouping etc.

The Idea Behind Classifly

The idea behind Classifly is to enable quick learning by using available sources related to an expert's expertise to avoid the needs in manual labeling of training data.
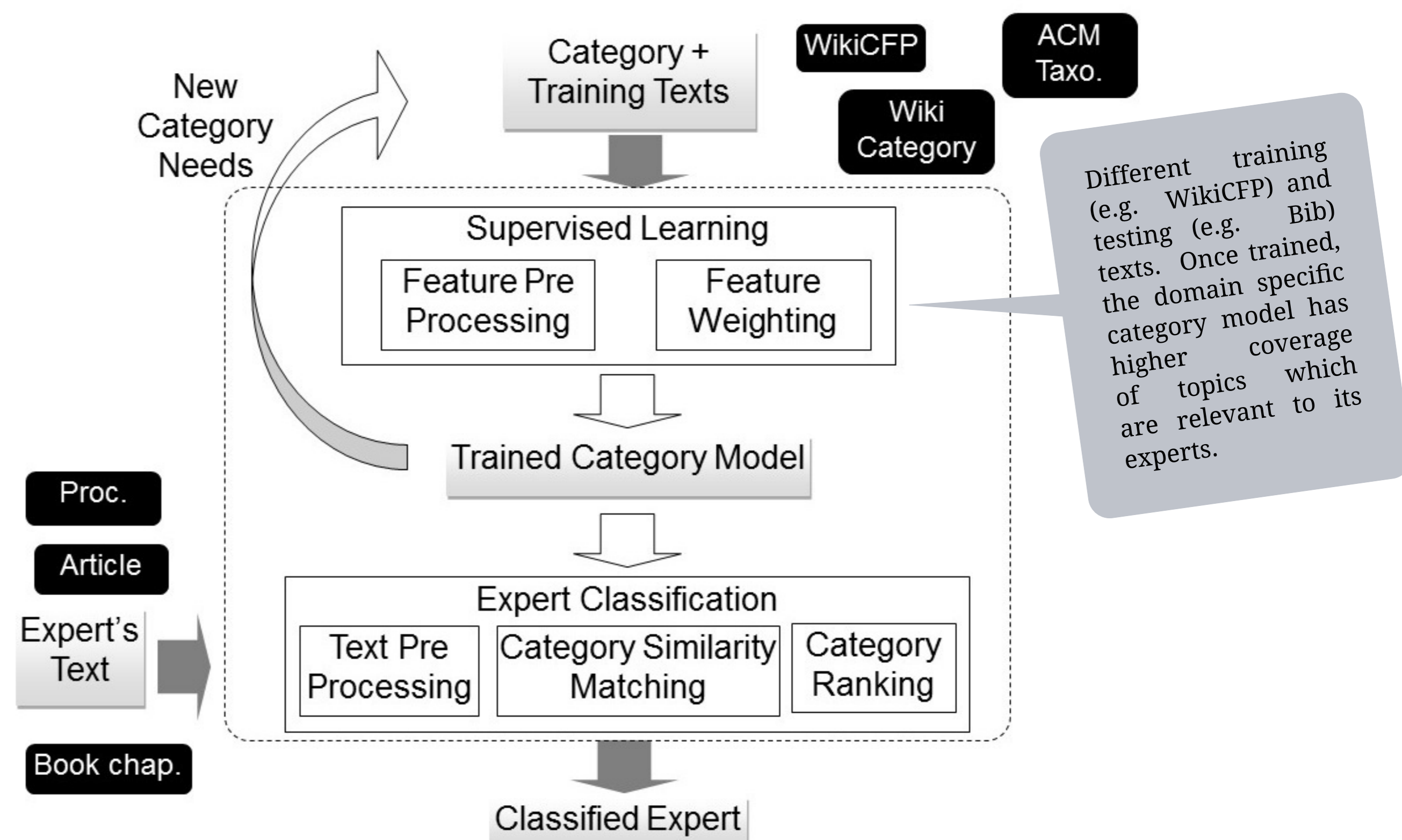
One example source is WikiCFP (categories) and its classified conferences (training texts).

The uniqueness of this system is that the categories/fields/areas of expertise can be easily trained to suit updates of expert's expertise.

On top of that, classification process can be applied for experts in different domains.

For long term basis, Classifly targets to serve as platform to classify experts of different domains with different category complexities.

Expert Classification Architecture

Different training (e.g. WikiCFP) and testing (e.g. Bib) texts. Once trained, the domain specific category model has higher coverage of topics which are relevant to its experts.

Use Case: Experts Search in Academic Domain

Who is familiar with bee colony algo ?

Who can supervise my thesis in info retrieval?

Who is in the area of security?

Picture Source: Partial Academic Staffs from School of Computer Sciences Website

Most Popular Categories of CFPs
(updated every hour)

Sort by # CFPs

Category	# CFPs	Category	# CFPs	Category	# CFPs
computer science	2628	natural language processing	206	information theory	93
artificial intelligence	2293	cloud	206	software testing	93
security	1581	network security	205	text mining	93
software engineering	1523	wireless sensor networks	202	power electronics	92
communications	1514	computer engineering	201	industrial electronics	90
data mining	1470	social science	201	web 2.0	89
engineering	1387	high performance computing	200	political science	88
education	1158	nanotechnology	199	medical	88
machine learning	1141	innovation	199	grid computing	88
networking	1113	chemistry	196	medical imaging	87

The ACM Computing Classification System (CCS)

Switch to Flat View   Generate CCS Codes

General and reference	Hardware	Computer systems organization	Networks
Software and its engineering	Theory of computation	Mathematics of computing	Information systems
Security and privacy	Human-centered computing	Computing methodologies	Applied computing
Social and professional topics			

- Cryptography
- Formal methods and theory of security
- Security services
- Intrusion/anomaly detection and malware mitigation
- Security in hardware
- Systems security
- Network security
- Database and storage security
- Software and application security
- Human and societal aspects of security and privacy

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