

## CS Professor and Students Take Apartment Hunting High Tech



Kevin Chang

As anyone who has ever moved knows, searching for an apartment can be exhausting. While web listings have reduced "driving around" time, apartment seekers must still navigate through countless classified ad, rental agency, and landlord websites to find the right listing--sorting through many duplicate and overlapping listings in the process. Apartment seekers who want to find previous tenant reviews of their potential landlords must then navigate through a host of other review sites. In the end, there is no single website where users can find a comprehensive list of apartments and related rental information.

Enter [computer science professor Kevin Chang](#) and his [MetaQuerier research team](#), and their new start-up venture [Cazoodle](#), located at the [University of Illinois Research Park](#).

Cazoodle provides software and internet services for Web search, integration, and mining, with a central objective to "deepen" search on the Web--to access the vast amount of data beyond the reach of current search

engines. Apartment data is but one example of the type of hidden information that current searches are unable to adequately reach.

"Every year, thousands of students, faculty, and residents come to town looking for apartments. They all spend several hours compiling lists of landlord and classified ad sites, sifting through each one to find a new place," said Chang. "Currently, there is no Google-like search site for apartments to make this process easy."

[Cazoodle Apartment Search™](#), the first product from Cazoodle, solves precisely this problem. It automatically searches all apartment listings, landlord, and review sites at once. Cazoodle can find an apartment-seeker's dream apartment over the web and connects them to the various data sources, much like what Google does for web pages. The difference with Cazoodle is that its searches include information found in structured data sources like databases in addition to unstructured information found in web pages. Searchers can easily narrow down listings, and receive web addresses and contact information for all matching properties, all from a single website.

The technology behind [Cazoodle Apartment Search™](#) was first developed by Chang and his students as part of his [MetaQuerier Project](#) at the University of Illinois and later at [Cazoodle, Inc.](#) Cazoodle's innovative approach involves analyzing and learning both the navigational characteristics of an apartment site and the HTML content of its web pages to generate a specialized "intelligent crawler" for that site. The result is a customized "apartment crawler" that retrieves information from all web sources and displays a comprehensive listing of source listings that match your specifications.

The technology can be applied to a variety of specialized domains; job listings, flight information, and other real estate listings are common examples of searches where users need access to both structured and unstructured data on the web.

"A significant and increasing amount of information is hidden on the 'deep' Web, behind the query interfaces of searchable databases," Chang explained. "There are numerous such autonomous and heterogeneous sources, each with a different schema and native query constraints. Current crawlers cannot effectively query databases, and so such data is invisible to traditional search engines, and thus remains largely hidden from users."

"With the [MetaQuerier](#) project and now with [Cazoodle](#), we propose to build a metaquery system, to help users in finding and querying online databases effectively and uniformly. Our efforts aim at opening up the deep Web to users," Chang added.

With its data extraction and search-based technology, [Cazoodle Apartment Search™](#) is expanding rapidly. Currently, the database covers the SF Bay Area, Los Angeles, Chicago, New York, and Champaign-Urbana. At the current pace, [Cazoodle™](#) is poised to expand to new locations steadily.

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