Airfares Made Easy (or Easier)

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You squeeze into your seat in the airliner, buckle up and then, against your best judgment, you start asking your seat mates what they paid for their airfare.

That's what Oren Etzioni did on a flight in 2002 and he discovered that, of course, others paid less for their tickets. Even worse, said Mr. Etzioni, a professor of computer science and engineering at the University of Washington, "they bought later than I did."

Mr. Etzioni, the brains behind such early Internet companies as MetaCrawler, a search engine, and Netbot, an online comparison shopping service, decided this was a situation computers could address. All he would need is a mountain of data to mine for information about seat supply and demand and an algorithm to predict how the airlines' algorithms were going to price those seats.

A brief student project proved that, indeed, computers could be far more reliable than a Magic 8-Ball. So Mr. Etzioni helped to create Farecast, an airfare search engine that also predicts how much the price of an airline ticket will rise or fall over the coming days (www.farecast.com).

The company was originally named Hamlet because its motto was "To buy or not to buy." That is the question, but the name was nevertheless a little obtuse for people on the Web rushing to look for cheap fares. The pun on "forecast" is a little subtle, but an easier association for travelers to make.

The company has attracted $8.5 million in venture capital, most recently from Greylock Partners, which has backed the college social networking site Facebook and the vote-on-the-news site Digg. It also received financing from the Madrona Venture Group, the Seattle concern that is staking Redfin, the online real estate broker; ShareBuilder, an automatic stock investing site; and PayScale, a site that gives consumers salary data.

Farecast could become a great tool for consumers because it uses much the same techniques that airline computers have used to extract the maximum amount of money from the flying public. It is the latest Web site to harness cheap computing power to hazard predictions on all sorts of everyday things and make the data available to consumers.

One such site introduced this year was Zillow.com, the real estate voyeur's guilty pleasure. It mines data in county land records to hazard a guess on the value of 65 million homes across the United States. The Seattle company says its "Zestimate" is within 10 percent of the selling price of a home, though many users have noted that the inaccuracy of the public records distorts the price estimates. Nevertheless, it is popular. In May, it had 2.4 million visitors, according to comScore, making it the ninth-most-visited real estate site.
Inrix, based in Kirkland, Wash., crunches data to predict traffic. It measures the speed of a half million commercial vehicles, like delivery vans and taxis, equipped with global positioning satellite receivers and also figures in information on weather and the scheduling of schools, factories and rock concerts.

Its Dust Network not only monitors the freeways, but the arterials and side streets as well, so that when a freeway is jammed and the arterial routes start backing up, the Inrix computers alert the driver to the least-busy alternative. The information for 15 cities is sold to Internet portals, cellphone carriers and in-car navigation systems. "It changes the way people think about traffic and navigation," said Bryan Mistele, the chief executive.

Farecast makes the same assertion for airline tickets. "This is Shopping 2.0," said Hugh Crean, Farecast's chief executive. It goes one step further than Web sites like Kayak (www.kayak.com), Sidestep (www.sidestep.com/air/) and Farechase (www.farechase.yahoo.com) from Yahoo that search the listings of the airlines and travel sites like Orbitz and then display the best deals.

A traveler picks the dates and destination of the trip just as he would at any other online airline travel site. (The Farecast site has flights only to and from Seattle and Boston, but promises to have all the major American cities by year-end.) Farecast generates a list of the scheduled flights, listing them from cheapest to most expensive.

What's different is that at the top of the screen is an arrow that points the direction Farecast's computer predicts fares are headed. Farecast even specifies how much it will change.

How do you know the computer is right? You won't know that until after you buy and neurotically check back to see what happened. The company said its success rate was 70 percent to 75 percent and that the fares would move within the range it predicted.

To get you to trust the site, the Farecast computer also tells you how confident it is of its prediction. "This is predictive technology — we won't achieve clairvoyance," Mr. Crean said. "We repredict and resimulate against our database to get better and better at what we are doing."

Airlines have been good at what the industry calls dynamic pricing. At a moment's notice, they can drop a fare to fill up an otherwise empty plane or raise a fare for a flight predicted to be packed. (The mystery, of course, is why so few airlines ever make any money when they can do what booksellers, movie theaters and soft drink vending machines don't do.)

Now the tables have turned. Farecast computers try to outthink the airlines' computers. Farecast buys data on the availability of seats and their prices from ITA Software, a firm in Cambridge, Mass., that sells the same data to travel agents, travel Web sites, computer reservation services and the airlines themselves. Farecast has information on nearly all the carriers except Jet Blue and Southwest.

With 50 billion prices in its five-terabyte database, the computer uses an algorithm that focuses on the volatility of airline prices and how that relates to airline inventory. Farecast says it monitors 115 indicators that are reweighed every day for every market, about 2,000 city pairs when the system covers the entire United States. Not only does it follow supply and demand, but also other factors that will shift traffic patterns, like the weather and who wins the National League pennant.

How useful is it if Southwest and JetBlue aren't included? Mr. Crean concedes the result would be better if he had that data, but the company's algorithm does pick up the impact of those airlines when the other airlines react to price changes.

The airlines won't mind his service, Mr. Crean says, because he channels Farecast users right to the airlines' own sites to buy the ticket. (The company gets a cut for every referral and it will make money from ads on the site.) He also doesn't think airlines will try to fool Farecast's computers. They want to maximize the revenue from each seat and won't jeopardize that.
If Farecast tells you that fares are going to go down, it would be smart to check everyday until Farecast changes its advice to buy. Farecast offers a number of other handy tools. It displays a map that shows you the cheapest tickets from your city, useful to people who want to fly on a whim to wherever. A more practical tool is a chart based on historical data that shows the best dates to travel on a particular route.

Once you’ve settled on a trip, Farecast presents a grid that shows you which departure and arrival time gives you the cheapest fare. Leaving in the mid-afternoon is generally cheaper than early morning or late-evening flights, something budget travelers know.

Once it covers the United States, the company wants to start adding foreign routes. It also has plans, according to patent filings, to do the same price predictions with hotels and rental cars.

As for guessing the price of everything else from gasoline, big-screen TV’s or hamburger, it intends to leave that to someone else's computers.

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