Jobs for CS Graduates

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How many computers do you own?
You’re wrong.
Computers are Everywhere

These days, just about everything has a computer in it.

<table>
<thead>
<tr>
<th>Digital cameras</th>
<th>Cell phones</th>
<th>Cars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft</td>
<td>Trains</td>
<td>MP3 players</td>
</tr>
<tr>
<td>DVD players</td>
<td>Pagers</td>
<td>Cranes</td>
</tr>
<tr>
<td>Microwave ovens</td>
<td>Traffic Lights</td>
<td>Clocks</td>
</tr>
<tr>
<td>Ovens</td>
<td>Alarm Systems</td>
<td>Buildings</td>
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Just about everything that isn’t furniture or an animal.
How is this possible?

Answer: Gordon Moore, Intel CEO

In 1965, predicted transistors per chip would double every 18 months at a fixed cost.

He’s been right for over 35 years.

Somebody’s got to program these things.
# The Spectrum of CS Jobs

<table>
<thead>
<tr>
<th>Software is their Product</th>
<th>Other Products, Use Software</th>
<th>More Education</th>
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</thead>
<tbody>
<tr>
<td>Microsoft</td>
<td>Banks</td>
<td>CS MS/PhD</td>
</tr>
<tr>
<td>Oracle</td>
<td>IT departments</td>
<td>MBA</td>
</tr>
<tr>
<td>Peoplesoft</td>
<td>Telecom</td>
<td>Law School</td>
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<tr>
<td>Video Games</td>
<td>Sony</td>
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<tr>
<td>many more...</td>
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Companies that Sell Software

There are two markets: consumer and business.

You probably know the consumer ones: Microsoft, Lotus, Game companies, etc.

Many more sell specialized software to business: Accounting, HR, CAD, Database

May be less well-known, but jobs just as interesting

Advantages: You are the stars, software is everything to these companies. Good role models.

Disadvantages: Deadlines, debugging, many features are technically uninteresting, but need to be done.
Companies that use software

Just about everybody else nowadays: banks, consulting firms, electronics companies, etc.

Many have substantial pieces of in-house software (e.g., billing, inventory systems, etc.)

Advantages: You may not be on the company’s “critical path.”

Disadvantages: May not be held in as high esteem. Management may have less respect.
More Education

Many students continue on for a Master’s degree. (More of the Same) Usually financially advantageous (starting salary higher, better advancement prospects).

A PhD is a whole other matter. Big commitment, big changes. Research positions (AT&T, others) or academia. Financially less clear, intellectually stimulating.

An MS costs $; a PhD is usually paid for by the professor.

Get some work experience then an MBA. If you like people (yuck), you, too, can be a manager.

Law School. Intellectual property lawyers pull in the $; technical education mandatory.