Rich Applications
info6005

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Electronics and Computer Science
Nike+GPS

Summary
Your Run on 6/19/11 at 12:25pm

7.52mi
8'56"/mi 1:02:06 431cal

Play Nike+ Tag
Share Run
Route Info
How was your run?

Cheers
Lance Armstrong
9 friends have cheered you on.

Kim Sewald: Good work! You Da bessssssssss!!! We need to go for a run soon. 2 minutes ago
Mark Wolton: You training for a marathon? 2 minutes ago
Carrie Bean: Awesome sauce! Let's meet up for a run soon. 2 minutes ago

History

Monday
14.7mi

Saturday
12.8mi
12/23/09
5.42mi
National Rail
Foursquare
Applications and data are resources which can be used to build new applications... quickly.

Rich applications source data and services from many places to provide something new.

Presented in the correct way, a simple breakthrough can make a $RICH$ Application.
Technologies

- RDF
- JSON
- jquery
- HTML5
- JAVASCRIPT
- Java
- APIs

...
Not that easy!

- Produce products (not code)
- Market Understanding
- Business Practices
- Packaging
- Distribution
- Cost
- Marketing!
Rich Applications

- Not about avoiding failure
  - Maintaining a level which doesn’t get you fired.

- This course is about Winning!
  - No extraterrestrial experiences are needed.
Building a Career

- "just a programmer" doesn’t result in building a career as there is only so many well paid “just a programmer jobs”

- Very hard to get a job if you present yourself as a JAVA Programmer, rather than a multi-skilled business orientated developer.
Striking A Balance

- **Work / Life**
  - You spend more than 50% of your waking life at work! Happiness at work WILL affect happiness at home. No such thing as work/life, it’s work AND life. Make sure you are happy!

- **Programmer / Architect / Manager**
  - Coding don’t cut it anymore
  - Un-informed management also not desirable
  - You can’t closely manage a team of people who speak a different language (cultural, programming and understanding barriers here)
Course Balance (Teaching)

Technologies
- Data
- Linked-Data
- APIs
- Mash-ups
- HTML5
- jQuery/Javascript (self taught)

“The Bigger Picture”
- Business Methodologies
- Planning
- Management
- Marketing
- Psychology
- Games
Course Balance (Assessment)

Technologies

Packaging and Distribution (CW1)
(Use Source Code Control Better)

Rich Application (CW2)
(Using technologies in a novel application)

The Bigger Picture

CW1 Documentation

The Pitch (CW2)
(Selling your Rich Application)
Lectures

- 2 a week until after Easter.

- Guest Lectures
  - Will fit in schedule dependent on guest availability

- Keep an eye on the website and turn up to find out what is happening.

www.ecs.soton.ac.uk/notes/info6005
Coursework Schedule

- CW1 – Packaging your software (Individual)
  - Use the reference code to build a Debian/Ubuntu package.
  - If you wish to package your own code, then you need to email davetaz@ecs.soton.ac.uk with details of this (see specification)
  - Final Specification Available Next Week

- CW2 – Develop and Present a Rich Application (Group)
  - This is an open ended coursework, however use of at least one technologies covered in this course is a must.
  - Each application will be pitched to a panel of judges.
  - Form your own groups – update your profile pages as a CV!
Exercise

On a piece of paper, sketch the curve below and then list technologies on each axis which are “on the rise”, “current hot property” and “on the out”
Where is the Money?

Note that where the money is for business might not be where the money is for developers! So also list your role.
Supply and Demand

- New technologies generate demand which supply can’t satisfy. Early web developers got lots of money.

- As supply catches up with demand, price goes down.

- Eventually this reverts again as a technology reaches end of life, specialists can make money again.
Coding don’t cut it anymore!

- If a company wants a .NET expert they’ll employ an offshore code robot.
- Domain knowledge is key to being relevant.
- Learn what the problem is in depth.
- Learn the needs of the business and its customers.
- Learn how your decisions will affect bottom-line.
- How can you make a cool application MORE profitable!
Invest in your Intelligence

- Become an analyst!
  - Follow tech news.
  - Keep your knowledge broad.
  - Invest your skills in new technology.

- Investment vs Risk
  - You might invest in something which doesn’t succeed, failure is inevitable.

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http://www.tiobe.com/index.php/content/paperinfo/tpci/index.html
Be A Generalist

- Software is soft and can be changed, the manufacturing analogy does not exist.
- How can you fix a bug when it is the surrounding environment (which you don’t understand) causing the bug (e.g. the database you are using doesn’t scale how you naively expected it too.
- Learn enough about enough to become knowledgeable.
- It’s amazing how many developers have no idea how to install the development environment they use (or even operating system)
- Windows vs Linux vs Mac OS X is not an argument you should be having!
Be a Specialist

- Too many of us seem to believe that specializing in something simply means you don’t know about other things.
- Lack of technical depth
- When addressing a high level problem, a specialist understands what is going on at the lowest level as well.
Don’t Put All Your Eggs in Someone Else’s Basket

- Your career is a business

- Don’t put vendor/technologies in your title!

Lab Exercise (optional): Try a small project twice, once in your “home” technology and once in a competing technology. Discuss differences with others.
Love It or Leave It

- If you are not passionate about your work, then it will show, both at work and in work/life balance.

- “Most people must get it?”

- Grass is greener?

- Work because you couldn’t not work
Being the Visionary
“Innovation Distinguishes between a leader and a follower”
“If you are not going to be the best, don’t bother”

“Be a yardstick of quality”
Be original, innovate, find a new market, corner it and be the best in it!
Summary

- Technology
  - We shall be looking at the curve of growing technologies.

- Knowledge Broadening
  - Methodologies and Management
  - Presenting a Pitch
  - HCI and User Experiences
  - Psychology / Addiction
Assessment

- First coursework looks at building software so that users can download and install it.

- Second Coursework allows you to apply tech and teaching in developing and pitching your application!

- Must be novel/original idea and focus on user experience.
Good Luck and Have Fun