Technology for a Better World

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App Inventor Summit
CS 80/180: Technology for a Better World

Information and Communication Technology (ICT)

Satisfies the quantitative and computational reasoning requirement
I, phone
How smartphone apps are transforming our lives
**Appsolutely everything**

The rapid rise in popularity of smartphone apps is matched by the sheer breadth of things you can do with them.

**CAR KEYS**
Zipcar shows nearby hire cars, which you can unlock and drive away using the app and iPhone alone.

**NAME THAT TUNE**
Want to know the details for the song that’s playing? Just hold your smartphone near the speaker and let Midomi or Shazam identify it for you.

**VITAL SIGNS**
Cardio Calc, Critical Care and iHeartRate Monitor let you check your pulse and your blood pressure.

**SEX AND THE VICINITY**
Apps such as Who’s Here and Grindr link you up with like-minded people near your location for chat, dating or sex. Be prepared to be sent unsolicited photos of penises.

**DRUG DEALER**
See where (medical) marijuana is available to buy nearby with an app called Cannabis.

**SECURITY CHECK**
Biowallet scans your iris with the smartphone’s camera to unlock access to your secret passwords.

**PERSONAL SHOPPER**
With Gocart and SnapTel, your phone camera can read barcodes, recognise books or album covers, then provide prices and reviews.

**BABYSITTER**
Baby Rattle, Baby Monitor and Diaper Tracker can make life a little easier for tech-savvy parents.

| 1.5 billion | Number of apps downloaded in the first year of iPhone App Store |
| 64,500     | New apps added to App Store since July last year               |
| 1/3        | Proportion of app users who say “apps have changed my life”   |
| 55 mins    | Average time per day app users spend on apps, about half the time they spend using it for calls |
| 22%        | Less time that app users spend on a computer                   |
| $2.57      | Average app price in July                                      |
| 169        | Number of new non-gaming apps appearing per day in the App Store |
Information & Communication Technology (ICT)
ICT in the developing world
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![Graph showing the growth of ICT in the developing world from 2006 to 2011. The red line represents the growth in millions of users, which shows a significant increase over the years. The blue line represents a different metric, showing stability over the same period.]
ICT in the developing world

[Graph showing the increase in millions of a certain metric from 2006 to 2011, with a sharp rise in 2009.]
Effect of a single phone on income

ITU research:

Indicative impact of telecommunications investment on wealth in LDCs

Iqbal Z. Quadir (1958-)
Motivating material

- Wikipedia (Mike Godwin)
- Rural Indian eye clinics (Eric Brewer)
- Biodiversity (Dave Thau)
- One Laptop Per Child
- Artificial intelligence
- Assistive technology
- Appropriate technology

Playing for water

- Appropriate technology
App Inventor labs

- GUIs
- Conditional statements
- Lists
- Procedure calls
- Global variables
- Games
- Sensors (orientation, acceleration, location)
Final project assignment

Build a helpful application
- App Inventor front end
- App Engine back end
- Presentation
Final projects

- Radio station interface
- Apartment finder
- Flash card tool
- Oakland crime information
- Pregnancy information
Did this course change the way you think about CS?
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“Yes...I became more aware of its power to change the world with the help of brilliant minds.”

[Child development major – weak programmer]
Did this course change the way you think about CS?

“I already really liked it, and now I like it even more.”

[English senior – weak programmer]
Did this course change the way you think about CS?

“Yes, It is not just numbers.”

[English senior – weak programmer]
Did this course change the way you think about CS?

“Yes, I saw that computer science affects more people than I originally thought and is used in almost every field.”

[Psychology senior – strong programmer]
Discussion