University of Finland and IBM cooperation

Dean, professor Pekka Neittaanmäki
Faculty of Information Technology
University of Jyväskylä
9.2.2017
University of Jyväskylä and IT Faculty
University of Jyväskylä

One of the top universities in Finland

Students come from all over Finland and abroad, from some 100 countries.

152-year history
(Teacher Seminary in 1863)
Core fields

- Learning, teaching and the learning and growth environments that support development
- Basic natural phenomena and mathematical thinking
- Languages, culture and communities in global change processes
- Physical activity, health and wellbeing
- Information technology and the human in the knowledge society
Profiling areas

Multidisciplinary research on learning, teaching, and learning difficulties

Accelerator-based physics

Cyber security
Faculty of Information Technology

- Founded in 1998
- Computer Science since 1967
- 2,760 students
  (2,588 BSc/Msc degree students and 172 PhD students)
- Teaching and research staff ca. 140, 14 full-time professors and 8 temporary professors or research professors
- Annual budget 14.3 M€ in year 2016 (8.8 M€ Government funding, 5.5 M€ external funding)
- Active cooperation with the industry
- IBM Watson University Program
Research in IT-Faculty

**Basic Research**

- **Applied mathematics and Computational Science**
  - Mathematical modelling, numerical analysis and reliable computing, signal analysis, data-analysis, decision making, quantum computing

- **Computer Science**
  - Mathematics of computing, mobile systems and networks, image processing and analysis, programming languages design, computing methodologies, cognitive computing

- **Information systems**
  - Information systems in use, IS management, IS security, IS security management, Cyber physical systems, human computer interaction

**Data intensive digital services**
- Digitalization, public services, global business, social media, service innovations, Intelligent web and service engineering, Internet of Things, Health Care

**Cyber Security and Big Data**
- Anomaly detection, cyber attack protection, security strategies, cyber defence, trusted computing, secure networking, Big data analyze, critical infrastructure protection

**eEducation and Cognitive Science**
- Innovative digital learning environment, gamification, Human-Machine Interaction, Digital Personal Learning Environment
Jyväskylä Healthcare Ecosystem

Kanga Health Care District

Central Finland

Faculty of Humanities and Social Sciences

Campus FI Center of Excellence

Research Centre for Health Promotion

Gerontology Research Center

Motor Behaviour Research Unit

NeuroMuscular Research Center

Faculty of Sport and Health Sciences

HIPPOS

KELA ICT Services

Faculty of Information Technology

Jyväskylä Centre for Interdisciplinary Brain Research

MATTILANNIEMI

NEW PLATFORMS

Kangas

Hippos

New Hospital

Kela

UNIVERSITY OF JYVÄSKYLÄ
University of Jyväskylä and IBM cooperation
University of Jyväskylä and IBM cooperation plan

Fall-Winter 2015
- Personnel training and skills development
  - Minor in the Data-analysis education
  - Hands-on experience with Watson instance, Guest speakers.

Winter-Spring 2016
- Minor in the Data-analysis education

Fall-Winter 2016
- Minor in the Data-analysis education
  - Watson training on Bluemix via Use Case Studies, University Days.

2017
- Minor in the Data-analysis education
  - Special Watson short courses
  - Shared research programs
28.8.2015
JyU and IBM Academic Initiative -program
- 1. in Finland, 2. in Scandinavia

12.9.2016
JYU + IBM: MOU on Finnish Digital Health Strategic Alliance
Digitalization, Data, Cyber and Business (D2CB) -program cooperation

Fall 2016
Fellows

Fall 2015
Best Student Recognition activity started
Summer School cooperation started
Cyber security cooperation started

Summer 2015

January 2017
Tekes Program kick-off 11.1.2017

Shared lectures in World of Watson conference, Las Vegas
IBM Watson special courses
IBM Almaden Research Center cooperation
Watson for Cyber Security – University collaboration preparation
Tekes-programs:
- Value from Health Data with Cognitive Computing. 11.11.2016
- Watson Health Care Finland, 9.1.2017
University of Jyväskylä and IBM Healthcare cooperation
JyU & IBM Healthcare cooperation

- Tekes (the Finnish Funding Agency for Innovation) and IBM announced 14.9.2016 a partnership that will enable Finland to utilize Watson cognitive computing to help doctors improve the health of its citizens, and strengthen and develop the Finnish innovation and business ecosystem in the fields of health and well-being. To facilitate the collaboration, IBM intends to establish a Watson Health Center of Excellence in Finland.

- 12.9.2016 University of Jyväskylä and IBM signed *Memorandum of Understanding on Finnish Digital Health Strategic Alliance - document.*
JyU-Tekes-IBM program

- The goal of this cooperation is to develop new innovative solutions exploiting the health data and Watson cognitive technology, and to boost related Finnish business and innovation ecosystem. The aim is to create new startup companies, open new possibilities for international business and to help Finnish healthcare and wellness companies to lead the digitalization wave.

- The program is connected to the Finnish healthcare IT development

- The program has two parts:
  - Value from Health Data with Cognitive Computing (1.10.2016-30.6.2017)
Program schedule

Phase I
- Digital Hospital
- Mobile Health

Phase II
- WHC Finland
- Ecosystem establishment

January-June 2017 | July-December 2017