

IBM Cognitive Computing Day at CMU

January 19, 2016

Summary of Cognitive Computing Job Requirements

Background:

The mission of the Cognitive Computing teams in IBM is to create cognitive systems that enable Humans AND Machines to perform better than EITHER Humans OR Machines. These systems are designed to create new partnerships between people and machines to augment and scale human expertise in every industry, from healthcare to financial services to education.

We have many openings for positions in Cognitive Computing, to conduct foundational research and development in a wide variety of areas such as analysis and extraction of knowledge from large volumes of structured and unstructured data (i.e. text, images, video, speech, etc.), machine learning, probabilistic reasoning, logic & rule-based systems, human-machine interaction, building and validation of cognitive systems, robotics, wearable computing, cognitive science, etc. If you have the skills to explore technology required for doing complex cognitive tasks in natural language understanding, video/image analysis, dialog, decision making, automatic text generation and summarization, and understanding technical documents, we are very interested in telling you about the career opportunities at IBM.

Position: Research Staff Member

Job Description:

If you are soon to be graduating, recent or experienced PhD graduate with strong publication records in cognitive computing and significant technical leadership potential, we want to talk to you. As part of the Cognitive Computing team, you'll conduct world-class research on new cognitive computing techniques, and publish in top-tier conferences and journals. You'll also have the opportunity to contribute to the commercialization of the resulting assets. Strong communication skills and ability to work independently as well as in a team are highly desired traits.

Education: Master's required / Ph.D. preferred.

Subject of degree: Computer Science, Artificial Intelligence, Applied Mathematics or Equivalent

Technical Professional Expertise (Not every skill is needed for every position, but more skills, the better)

Experience levels are Basic, Intermediate, Advanced, Expert.

Skill or experience	Experience Level	Required or Preferred
General Programming skills in one or more of these languages: Java, Javascript, Python, C++, Node.js, LISP, etc.	Expert	Required
Communication Skills.	Expert	Required
Software engineering practices including agile processes	Advanced	Required
Use of machine learning environments (e.g., R, scikit-learn, Theano, Torch, etc.)	Expert	Preferred
Data Mining/Automated Knowledge Acquisition, Representation & Reasoning	Expert	Preferred
Characterization and validation of cognitive systems via User studies.	Advanced	Preferred

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Position: Software Engineer

Education: Bachelor's required / Master's preferred

Subject: Computer Science, Artificial Intelligence, Applied Mathematics or Equivalent

Job Description:

We are looking for graduating, recent and experienced graduates with strong interest in cognitive computing and experience in implementing complex algorithms arising in data intensive applications spanning multiple disciplines. You will work in close collaboration with other researchers and engineers to create, maintain and support world-class cognitive applications and/or infrastructure. You'll also deliver production level-code to support the commercialization of the resulting assets. Strong communication skills are essential.

Technical Professional Expertise: (Not every skill is needed for every position, but more skills, the better)
Experience levels are Basic, Intermediate, Advanced, Expert.

Skill or Experience	Experience Level	Required or Preferred
Strong programming skills (C/C++, Java, Python, Javascript, Node.js, etc.)	Expert	Required
Software engineering practices including agile techniques.	Expert	Required
System building/debugging/testing skills	Expert	Required
Building Cloud Applications using APIs and Services	Expert	Required
Communication Skills	Expert	Required
Monitoring and Feedback for self-learning autonomous systems	Advanced	Preferred
Experience with standard machine learning techniques & machine learning toolkits such as R, scikit-learn, and Theano, Caffe, Torch.	Advanced	Preferred
Experience with CUDA programming on GPUs	Advanced	Preferred
Scale-out programming (e.g. MPI)	Advanced	Preferred