



IBM Smarter University Brno INTERNSHIP PROGRAMME

OFFERING CATALOGUE IT projects

Autumn 2016

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catalogue and let us know
what position interests you**



Contact us at: students@cz.ibm.com



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ibm.box.com/InternshipBrno

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A. E-Receptionist Smart Avatar @Technical Expertise Council Brno

Do you want to explore and learn how to use the newest IBM technology, which has won the RISK contest over the best players in the US? Are you familiar with the Watson Cognitive Services? No worries if not, we are creating a small development team which will explore and apply this technology to create a new "Cognitive" way of how the information are delivered to users not only by brute force searches but understanding the data context and delivering the right answer.

Required skills:

- Programming skills with focus on one or more of these: HTML5, CSS, Python, NodeJS, Java Script, Android, SQL..
- Enthusiasm to explore and learn new technology



B. SMART (IOT) ROOM RESERVATION SYSTEM @ Technical Expertise Council Brno

Do you want to explore and learn how to use the newest IBM technology, which has won the RISK contest over the best players in the US? Are you familiar with the Watson Cognitive Services? No worries if not, we are creating a small development team which will explore and apply this technology to create a new online room reservation system utilizing Watson services together with the power of the Internet of Things devices.

Required skills:

- Programming skills with focus on one or more of these: HTML5, CSS, Python, NodeJS, Java Script, Android, SQL...

C. Application Administrator

The world of IT is full of stories about system crashed, application issues and other problems. To avoid this there are tools to help us to detect possible threats to the environments before the problems arise. This will challenge You to seek the information how to troubleshoot the issues from the deepest corners of the operating systems to even an outlays of a such application as SAP.

Are You up for the challenge?

We monitor systems and servers so that they do not crash and fail. You can be part of the team that works on this prevention. Thanks to you the systems of our customers will work perfectly and the world will be a safer and secure place!

Required skills:

- Unix user experience
- English on B1 level
- Basic knowledge about network



D. System Administrator - SAN and Disk Administration

Special opportunity to become a member of Storage team responsible for end to end administration and maintenance of Storage area network and Storage systems in large customer environment. You will get introduced to Storage Area Network concepts and its best practices aligned with latest Storage technologies. Our program is intended for real hands on experience to gain or improve knowledge in a role of Storage engineer highly recognized in IT market nowadays.

Required skills:

- Basic Windows OS knowledge
- Basic Unix system knowledge
- Network basic knowledge
- Written and spoken English B1 level



E. z/OS Mainframe storage: Analysis and optimization of data retention

As z/OS storage administrator you will learn the basics of z/os storage management. Work with spreadsheet editor to analyze data, prepare custom reports, propose changes for optimization of data retention settings. You will also have possibility to develop scripts to automate tasks. You will support systems of some of the worldwide largest financial institutions - banks, insurance companies, car makers and other multinational companies.

<https://youtu.be/VNroBwMmdZQ>

Required skills:

- Required skills:
- Master Level MS Excel.
- IT background, scripting knowledge



F. Automatic System Shutdowns Procedure Tuning

In general - automation - is future of IT, new discipline in IT and it is encoded in human's DNA. The System Automation administrator is responsible for implementation and maintenance of Mainframe Automation environment. The purpose is to identify opportunity for automation and eliminate manual activities performed by IT specialists. 92 of the world's top 100 banks use mainframes, 23 of the top world's 25 retailers use mainframes and All of the world's top 10 industries use mainframes. They handle 90% of all credit card transactions, they hold 80% of the world's business data, they run 30 billion transactions per day. 71% of Fortune 500 companies use mainframes.

Required skills

- Ability to using logic and reasoning
- Willingness to learn
- Responsibility and teamwork
- Basic computer skills with advanced Microsoft Excel skills

G. Security Researcher

As in the offline world, danger lurks in the online world too. An old saying says - "know your enemy". Why not to get him know directly in the IBM Client Innovation Centre Brno and make a research there? And get a taste of the corporate security? According to the interview with the intern, a security-related topic will be chosen. Depending on the technical knowledge, it might be a technical or more theoretical topic.

Required skills:

- Basic to average knowledge of IT security and interest in security topics
- Preferred would be a student of security subjects (i.e. VUT)



H. Performance/stress-testing methodology for social collaboration software IBM Connections 4.5

We are looking for intern capable to prepare and implement methodology for performance/stress testing of social collaboration software IBM Connections 4.5. IBM Connections consist of several connected components (IBM Websphere servers, LDAP, DB2, Netscaler load balancer), so the main tasks of this project are:

- identify bottlenecks and limits of IBM Connections components, prepare methodology to test it
- program/automate stress-testing, implement it in customer environment

More information about Connections 4.5 can be found using the link below: <https://ibm.biz/Bdrhei>

Required skills:

- Analytical skills, Windows administration skills
- Knowledge of DB2 backend, LDAP, network, Websphere or Websphere plugins is an advantage
- Programming skills is an advantage, experience in resolving performance problems/stress-testing is an advantage

I. Data Analyst

Data are considered as new natural resource and they are used in all areas including business, science, IT, healthcare etc. In particular for our team we are working with the clients from various industries like banking, retail etc. In our team there is big space for creativity and invention. People skilled in Data Analytics will be highly demanding on the market. Data Analytics market is worth more 50 Billion USD.

Required skills:

- Interest in Data Analytics and Data Science, Theory of Advanced Analytics
- Basic of Statistics, At least basic skills of R programming or Python or VBA programming
- Basic of SQL, Data Visualization

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katerina.pankova@cz.ibm.com



J. Junior SW Developer

Our development team is organized as a Scrum team. The internship student will become regular team member of this self-organized team. The tasks are organized in 2 weeks sprints and this project will be part of those sprints too. We are looking for an enthusiastic student who enjoys coming with new ideas and proposing innovative solutions. You will become part of an international team full of experts who will help you grow and gain knowledge in area of software development.

Required skills:

- English – intermediate
- Programming skills Basic Java



K. Converged Infrastructure Operations Model - Analysis Of Options, Network Team

We manage the infrastructures that run today's world. We know how, when, why. But we are still only people.

Will your ideas define the future of IBM business? Maybe, maybe not. One thing will be yours wherever you go - the Open Mind.

You already have one? Great! You are at the right place for what this internship is needs.

Required skills:

It is expected of the candidate to have basic knowledge in the area of IT environments. Understanding the Client-Server model, the distinction between Compute, Network a Storage resources, layered protocol and software concepts etc.

Deep knowledge or to be familiar with specific technologies is not required as the value of the Intern for the project will be to bring an "outside-the-box" perspective. Specific know-how required for the technology-matching implementation work will be shared by the mentor and specific goals will be adjusted depending on intern skills



L. Unix health checking

We are looking for enthusiastic and talented juniors to help us improve security on UNIX servers we administer. Some prior knowledge of Unix systems and related scripting would be very welcome, as we are looking for someone, who can identify security loopholes in comparison to general Best Practices and help us comply with all requirements that are in place for such devices. Your goal will be making our Unix servers compliant and safe from customer perspective, while developing your own skills (shell, Unix, regular expressions...). Your work will encompass everything from simple health checking and troubleshooting to devising complex solutions that will be feasible for production environment of our customer.

Required skills:

- Basic knowledge of Unix like systems
- Basic level knowledge of regular expressions and shell scripting
- Intermediate level English

What you can learn:

- Deepen knowledge of shell and Unix



M. Shift plan web application developer for Business Intelligence team

Do You want to try to work in the such big company like IBM is?

Do You want to improve and develop your analysis skills?

Do You want to improve your English and work in multicultural team?

Take a chance and get some experiences in the real company, not just in a school.

You can get the job after finishing internship program.

Join us!

Required skills:

- Basic knowledge of database (MySQL, Postgre, ...)
- Basic knowledge of web technologies - html, PHP, CSS... Some PHP framework maybe.
- Basic knowledge of Linux administration.



N. Watson IT Help - Software Engineer

We live in a moment of remarkable change and opportunity. The convergence of data and technology is transforming industries, society and even the workplace. New roles are being created that never existed before to meet the demands of this transformation. Embark on the journey with us at IBM Brno Watson Lab. As a Watson Software Engineer, you are a critical to achieving our mission and responsible for evolving our cognitive applications to address new business opportunities. In this role, you will be helping implement and deliver next generation applications based on leading cognitive computing technologies to solve both broad and industry specific problems. Discover what you can make of this moment. What will you make with IBM Brno Watson Lab?

Required skills:

- Java/ Java Script/Python programming skills
- HTML, CSS3, JSON is an advantage



O. Watson recruiter - Software Engineer

Come and create a cognitive intelligent system. Using Watson technology (Artificial Intelligence) the system will communicate with job seekers in natural language, learn about their skills and propose the best matching jobs according to their experience.

Required skills:

- Java/ Java Script/Python programming skills
- HTML, CSS3, JSON is an advantage

P. IoT Engineer (Internet of Things)

Our team are looking for 2 students (Bachelor/Master/PHD level) a technically oriented person who will help us to grasp new technologies and demonstrate their use on real projects for major customers around the world. We are dedicated to projects from the portfolio of IBM Watson, Analytics, Dialog systems and IoT (Internet of things).

Required skills:

- Java Script/Python programming skills
- Knowledge of Raspberry Pi/ Arduino/ Electronics is an advantage



Q. UI/UX Designer

Your role in the team will be to help from the brainstorming phase until the creation of the prototype or product. By giving your idea's, shaping the feel and look of the final product. You will be developing mock-ups, mobile Apps and websites according to your skills.

Required skills:

- HTML, CSS3, Java Script
- Experience in Graphic Design, with knowledge of Adobe Illustrator/Photoshop is an advantage1
- year experience in User Experience (UX) design is an advantage
- If you already built websites and mobile apps is a big advantage



R. Network/security lab installation and implementation

The selected candidates will be responsible for the setup and management of the part new Network Laboratory that has been recently deployed at IBM (CISCO/JUNIPER/CHECKPOINT/F5/VMWARE NSX). The responsibilities will include:

- Build laboratory from new HW devices and virtual devices. Setting up and keeping up to date a dedicated online wiki which will cover many different Networking Technologies.
- The creation of various WorkBooks which will describe in full detail different testing scenarios; including initial network configurations, troubleshooting techniques, etc.
- The selected candidates will be supported by two Senior Network Technicians. They will also be elected for different Juniper trainings and will be given free exam vouchers in order to keep track and proof of their certification. This will allow them to improve their skills in the latest Juniper networking technologies, including routing, switching, SDN and security.

Required skills:

- Basic networking knowledge
- Microsoft Office
- Linux is advantage
- General overview of network devices



S. Site Operations tool optimization, Junior Project Manager

Do you like when the things are right and efficient? Have you felt in love with programming? You are the right person for our Site Operations Team which is responsible for internal standard operations (innovations, improvement of space,...). Your goal will be to investigate and design possible optimization of internal Site Operations tool and standard processes. The tool is used for management of assets, lockers and seats in our centre.

Required skills:

- Programming in Java/PHP
- Ability to coordinate tasks/people
- Self-driven and innovative approach
- Analytical thinking
- Good time management
- Communication
- Communicative English (spoken and written) at least on B2 level requests

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katerina.pankova@cz.ibm.com



T. Arduino prototyping platform development

We're looking for an intern to assist us in the design and development of different projects based on Arduino prototyping platform. The projects are with education purpose for kids between 10-12 years old and aim to give hands-on experience to robotics, programming, and electronics while playing and having a great time during class lesson(s).

Required skills:

- Knowledge of programming preferably C++
- Test development, algorithms and data structure
- Have excellent analytical and problem solving skills with a LOVE for Arduino development
- Constantly push yourself to get better at you
- Want to work with an innovative company
- Thrive in an Agile environment





SMARTER UNIVERSITY INTERNSHIP PROGRAM AT IBM DC BRNO 2015/2016

IBM Delivery Center Czech Republic Brno is one of the biggest and most diverse IBM centres of its kind worldwide. The Brno centre's core activities focus on providing strategic outsourcing services, remote server and application support, networking services and end customer support.

We are offering you an opportunity to join us for an autumn internship scheduled for October–January.

Technical & Administrative Projects

IT project? IT-related project with focus on languages? Project management project?

We have a number of interesting projects waiting for you, and it doesn't matter if you are a student of IT, management or something else.

If you are interested in gaining experience in a multinational IT company, send us your CV and we will contact you with opportunities fitting your profile.



What can you expect?

- Work on a project as an equal member of your department
- Individual support from your own mentor
- Improvement of your English skills
- Opportunity to attend internal trainings
- Meeting people from all over the world
- Opportunity to build your contacts network
- Presentation of your project's results in front of your team
- 20–35 working hours per week (35 for Erasmus+ students)

The internship is not paid, but after a successful internship there is a possibility of further cooperation with IBM Brno, even in the form of a part time job in some departments (15 of 23 interns received job offers after the last internship run)

What skills do we require?

The required skills depend on the project, but mainly:

- English on a communicative level
- Communication skills
- Time management
- Presentation skills
- IT skills (for IT projects)
- French or German speakers are much appreciated

Detailed description of the internship position will be given at the interview.

Further information and registration

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