

Research Scientist
Worcester Polytechnic Institute

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Job Title	Research Scientist
Department	
Institution	Worcester Polytechnic Institute Worcester, Massachusetts
Date Posted	Mar. 13, 2020
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Research Scientist/Associate
Academic Field(s)	Computer/Information Sciences
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Job Description	

JOB TITLE

Research Scientist

LOCATION

Worcester

DEPARTMENT NAME

Computer Science III

DIVISION NAME

Worcester Polytechnic Institute - WPI

JOB DESCRIPTION SUMMARY

We seek to hire a research data scientist to join our research team, which includes faculty, several

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graduate students and a postdoctoral researcher, for the DARPA-sponsored Warfighter Analytics using Smartphones for Health (WASH) project.

Warfighters face an increased exposure to ailments such as Traumatic Brain Injury (TBI) and infectious diseases. Digital biomarkers are smartphone-sensible user behaviors that can reliably indicate the health status, ailment symptoms and condition of the smartphone user. For example, an ailing smartphone user may exhibit reduced daily step counts, slurred speech, or an increase in sedentary activity states during their day.

Our team is researching and developing machine/deep learning algorithms that synthesize reliable smartphone biomarkers for the detection of ailments. Continuous, real-time assessment of TBI and infectious diseases afflicting warfighters will be enabled by mining data unobtrusively captured from smartphone sensors. Our resulting smartphone biomarker detector will be tested and ultimately deployed on a cohort of millions of smart-phone users.

JOB DESCRIPTION

Responsibilities:

Besides participating in research resulting in quality publications, the data scientist will also program data science frameworks to carry out machine/deep learning experiments on tera-scale data sets, assist in managing and quality testing the project software project, coordinating the research of undergraduate and graduate students, managing and integrating project tasks across the team, and preparing project deliverables for the sponsor.

Funding for the research data scientist position is available for 12 months; with a likely extension for a total of 4 years.

Requirements:

The ideal candidate will have at least a Master's degree or preferably a PhD degree in computer science or a closely related field, with demonstrated experience in statistical analysis, signal processing, software development, machine learning, and deep learning, project management and big data analysis. Example tasks to be undertaken the research data scientist include:

- * Feature engineering of smartphone sensor data, voice and images
- * Statistical analysis of personalized behavior typical of a smartphone user
- * Detection of higher-order composite activity states and contexts from lower-level signals

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- * Machine and deep learning of robust outliers from normal, healthy behavior
- * Unsupervised learning on high-dimensional data sets for personalized classification
- * Inference of classes of diseases affecting a smartphone user
- * Empirical study and evaluation of robustness of biomarker detectors
- * Scalable secure data processing on the cloud
- * Systematic testing and documentation of research software
- * Project management for the team

Integration of student machine learning modules into a unified software infrastructure. An interest in interdisciplinary research, in particular, in digital health, and a proven track record of high-quality research or project work, software development and academic excellence are expected. Experience analyzing smartphone sensor signals is desirable but not a must. Excellent written and verbal communication in English are required.

Required Documents:

- * Cover letter
- * Curriculum Vitae
- * Statement of research and project interests
- * Names and contact information of three references

Inquiries can be sent directly to Professor Emmanuel Agu (emmanuel@cs.wpi.edu) Computer Science Department

FLSA STATUS

United States of America (Exempt)

WPI is an Equal Opportunity Employer. All qualified candidates will receive consideration for employment without regard to race, color, age, religion, sex, sexual orientation, gender identity, national origin, veteran status, or disability. We are seeking individuals with diverse backgrounds and experiences who will contribute to a culture of creativity and collaboration, inclusion, problem solving and change making.

To apply, visit: [\[url=https://apptrkr.com/1867905\]](https://apptrkr.com/1867905)https://wpi.wd5.myworkdayjobs.com/en-US/WPI_External_Career_Site/job/Worcester/Research-Scientist_R0000131

About WPI

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WPI is a vibrant, active, and diverse community of extraordinary students, world-renowned faculty, and state of the art research facilities. At WPI, we have competitive and comprehensive benefits, including health insurance, long-term care, retirement, tuition assistance, flexible spending accounts, work-life balance and much more.

Diversity & Inclusion at WPI

WPI is committed to creating an inclusive workplace where everyone feels valued and respected; a place where every student, faculty and staff member can be themselves, so that they can study, live, and work comfortably, to reach their full potential, and make meaningful contributions in order to meet departmental and institutional goals. WPI thrives on innovative practice and welcomes diverse perspectives, insight, and people from diverse lived experiences, to enhance the community environment and propel the institution to the next level in a competitive, global marketplace.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Worcester Polytechnic Institute

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