University of Pittsburgh | Informatics and Networked Systems
School of Computing and Information

You are receiving this email because you are enrolled in the MSIS/MST graduate degree programs within the Department of Informatics and Networked Systems at the School of Computing and Information. Each weekly newsletter will feature important updates on career/academic and job opportunities, department and school events, enrollment guidance and upcoming academic deadlines.

Available in Person in IS Building Room 706 starting January 3, 2024, Monday through Friday 8:30am to 5pm

Confronting Online Hate

A Hybrid Tech and Policy Hackathon
February 9-16, 2024

Hacking4Humanity 2024 is a hybrid hackathon with virtual work and an in-person competition on February 16 at Duquesne University's Power Center. Online hate is on the rise, leading to real-world devastating effects on individuals and communities around the world. Join Carnegie Mellon, Duquesne, University of Pittsburgh, and other students in the Pittsburgh area at a multidisciplinary hackathon to develop new tech and policy solutions that mitigate online hate and create safer communities. Curious? Scroll for the FAQ!!

Ready to register? Register as a individual or team today!

Hacking4Humanity 2024 Registration (google.com)

CALLING ALL ROBOTICISTS.

Applications are open from
January 15-February 29 for the
Robotics Factory-Accelerate Program to propel your robotics startup to the next stage of success.

The program leverages the network of resources in Pittsburgh's globally prominent robotics ecosystem to propel your robotics startup to the next stage of success. Selected companies receive the following benefits:

- Up to $100, 000 in funding from Innovation Works

- Access to our community of mentors, manufacturing support, customized programming, and other quality resources.

For more information, visit our website: **roboticsfactory.org**

2024 - Software Engineer Internship/Co-Op

Carnegie Robotics, LLC
On-site ·
Pittsburgh, PA
Interning with us:

Carnegie Robotics seeks outstanding students for our internships and co-ops. We view internships as excellent opportunities for us to learn about future potential full-time hires while also contributing to students' education and their understanding of work practices in an engineering setting. Many of our interns return annually and take on ever more challenging tasks. **Please note that this is a full time, on site position.**

We accept **college sophomore, junior, senior, masters and PhD level students.** In all cases we expect to see excellent grades, work ethic and a strong desire to accomplish goals. We pay well and will help you grow beyond your technical comfort zone.

Software Engineering Interns will be treated as junior engineers on development teams and will work closely with an assigned mentor to contribute on the following aspects of development projects:

- Creating software for robotics components and systems, including algorithms, high-level C++, lower-level C code, and user interfaces.
- Testing software in system integration laboratories, simulation, and on fully-realized robots.
- Analyzing system performance through the use of data logs and the creation of post-processing software and scripts.
- Working in the design space by writing use cases, software specifications, hold and participate in design reviews and coding peer reviews.
- Working with sensors and lower-level technologies like serial buses, Ethernet, and CAN.
- Integrating different sensor, actuator, and computing technologies into robotic systems.
- Documenting software using industry-standard best practices.
- Conforming to company policies regarding confidentiality, software licensing, and export control restrictions.

Some examples of previous work include:

Computer Vision (Skills utilized: C++/Python/ROS/GitHub)

- Developing an algorithm to estimate pose of an Apriltag with an unknown size prior using stereo data
- Writing software to align pointclouds and evaluate quality of 3D reconstructions vs CAD
- Testing pose estimation software on a jeep and writing scripts to interact with hardware and plot results

Computer Vision (Skills utilized: C++/Python/ROS/Algorithmic development/debugging/GitHub)

- working as part of a team on developing and improving a full-stack warehouse distribution robotic system consisting of 100s of mobile robots (in simulation and on the real system)
- helping with the integration and testing the software stack against the customer software

- developing a number of unittest and integration tests for critical software modules
- learned new software skills (design and implementation) and novel ways of designing a robotics system from the ground up

Machine Learning/Computer Vision (Skills utilized: Python/C++/Open Source Machine Learning, GitHub)

- design processes, write python scripts, and C++ tooling to support software engineering process of integrating safety requirements management with shock, vibe, and high/low temperature testing

Cloud (Skills utilized: Javascript, React, REST API, Docker, GitHub)

- building a front-end application for our cloud-based SaaS offering. This included building/managing the front-end application, utilizing and contributing to the backend software, and working with the cloud infrastructure.
- The front-end was built in Javascript using React and interfaced with the backend through an OpenAPI-based REST API. Libraries such as Material UI were leveraged to create a clean, professional looking web application while the developer could focus on functionality.
- Containerization (Docker) was used to emulate the backend locally, while a cloud development deployment was used to test the application in an environment similar to production. Running the backend locally allowed the intern to contribute directly the backend project as well.
- Projects, issues, and most of the DevOps were managed in GitHub, providing the developer with a clear, full end-to-end view of the development pipeline which they contributed to.

Hourly wage range is based on education and experience.

2024 - Software Engineer Internship/Co-Op | Carnegie Robotics, LLC | Handshake (joinhandshake.com)

.Net Developer

TekInsta Solutions
Remote ·
Chantilly, VA

Role Description

Job Title: .NET Developer

Preferred qualifications

· Strong knowledge and proven working experience as an ASP .NET/ASP.NET Core developer
· Hands-on experience in developing ASP.NET Core/ ASP .NET MVC applications
· Well-versed with Microsoft's .NET framework and tech stack
· Proficient in C# and VB.NET programming languages and extensive working knowledge of .NET languages
· Strong understanding of object-oriented programming concepts and methods
· Familiar with entire software development lifecycle and development approaches
· Hands-on experience in database design, architecture, and integration
· Experience working with WebAPI, Entity Framework, ADO.NET, SQL Server, Oracle, HTML,CSS, Bootstrap, JavaScript, AngularJS or higher version, JQuery, Ajax, Bootstrap, and VB.NET

· Working knowledge of Microsoft development best practices, design patterns, and tools
· Familiar with web application lifecycle and frontend, backend frameworks
· Knowledge of web services, WCF, and SOA (Service Oriented Architecture)
· Must have experience working with web technologies and frameworks
· Knowledge of design patterns and principles and .NET patterns
· Sound understanding of code versioning tools and CI/CD pipelines.
· SOLID principles.
· Versioning
· DevOps, Docker

.Net Developer | TekInsta Solutions | Handshake (joinhandshake.com)

**********Please be advised, that if you have any questions, you can always reach out to me via email (jap306@pitt.edu) and phone number (412-383-4212). **********

Regards,
James Petraglia (Pa-trail-ya)