Computing, Math, & Data Sciences Internship

Pacific Northwest NATIONAL LABORATORY
Proudly Operated by Battelle Since 1965

Do you want to be challenged with hard problems in national security, energy, and science and apply cutting-edge research to make our nation safer and stronger? Does developing complex computer code, competing in cyber warfare games, designing new visualizations, optimizing solutions for energy or climate, or working with real world big data sound compelling to you? Do you want to work side by side with world-class scientists?

Join us as an intern in Pacific Northwest National Laboratory's (PNNL) Computational & Statistical Analytics Division. We're looking for smart, creative, and motivated students who have a passion for solving critical national challenges using advanced computational, statistical, and mathematical techniques in both Richland and Seattle, WA.

DIVERSE FOCUS AREAS

Your internship will land you in one of six technical groups:

Applied Statistics & Computational Modeling

We are comprised of statistics, mathematics, and operations research experts who work in multi-disciplinary teams and employ powerful tools and techniques, such as mathematical modeling, optimization, statistical analysis, algorithm development, computational statistics, and operational modeling and simulation to solve complex problems in a variety of domains and help clients reach mission-focused solutions.

Typical disciplines of interest: statistics, applied mathematics, operations research

Cyber Security

We work in partnership with government agencies and industry to perform research and development to deliver "first of a kind" solutions to protect our nation's critical strategic assets. Our group's capabilities include cyber situational awareness, cyber network defense, and secure systems research and engineering ranging from network to software to embedded systems, and have direct impact on our national security and scientific missions.

Typical disciplines of interest: cyber security, computer science

Data Sciences & Analytics

We operate on the data-to-knowledge continuum distilling large, fast, distributed, and messy data into knowledge to support decision processes. We apply expertise in data engineering, semantic and human language technologies, machine learning, and data architectures to create advanced computational solutions for complex analytic challenges.

Typical disciplines of interest: applied statistics, data science, psychology

Software Engineering & Architectures

We develop and deliver well-architected and well-engineered software-centric systems, combined with integrated software, hardware, data and sensors. Our staff create and deploy sustainable software and hardware systems used in high-impact production environments.

Typical disciplines of interest: software engineering, mobile, application development, systems integration, architectures, software testing

Visual Analytics

We make big, complex data useful through skillful visual design, compelling human-computer interaction, sound analytic methods, and solid engineering. We invent new visual metaphors, create analysis algorithms, and deliver software products that put powerful visual analytics capabilities into users' hands. The team collaborates with experts across the laboratory and around the

world—including statisticians, machine vision experts, modelers, and domain scientists to solve our sponsor's hardest analysis challenges.

Typical disciplines of interest: information visualization, user centered design, human-computer interaction, virtual/augmented reality, data science

Analysis & Operations

Who is knocking on our network doors and why? We use a multitude of information sources to answer these questions and identify threats to critical networks and systems, creating tools that help us become more efficient at identifying those threats. We also provide system administration and technical support to keep those tools and systems operating at the cutting edge in mission-critical environments.

Typical disciplines of interest: cyber security, computer science, analytics, information management

YOU WILL BE INVOLVED

During your internship you will have a unique opportunity to be part of a growing team focused on challenges that range from basic science to technology transition and deployment. You will be invited to roll up your sleeves and work side-by-side with our scientists, engineers, and analysts and challenged to be a core part of our diverse teams. Your participation and contributions will be used to develop solutions, reports, briefings, and recommendations to national security sponsors from the Department of Energy, Department of Homeland Security, Department of Defense, and more. Moreover, you will be encouraged to challenge the status quo, provide innovative alternatives and to think 3-5 years down the road. Strong communication skills and the ability to learn and work at a fast pace will help you succeed in our environment.

Our goal is to provide students with full immersion into the challenges of national security. Our interns have the opportunity to apply concepts, protocols and tools acquired through coursework in the real world! We also provide numerous enrichment activities where you will get to know students from around the nation, hear from leading research scientists during scientific seminars covering a myriad of topics, learn about or nation's rich scientific heritage in the national laboratory complex, and enjoy numerous extracurricular activities in the wonderful Pacific Northwest.

ABOUT PNNL

Interdisciplinary teams at PNNL address many of America's most pressing issues in energy, the environment and national security through advances in basic and applied science. Founded in 1965, PNNL employs 4,400 staff and has an annual budget of nearly $1 billion. It is managed by Battelle for the U.S. Department of Energy's Office of Science.

For the full listing of open PNNL positions, visit:
Jobs.pnnl.gov

For more information, contact:

Fred Bond
University Recruiter
Pacific Northwest National Laboratory
3230 Innovation Blvd.
Richland, WA 99352
509-372-6735

fred.bond@pnnl.gov