



**POSTDOCTORAL RESEARCH FELLOW
VISUAL ANALYTICS LAB
MULTI-VARIANT DATA DISPLAY**

POSITION SUMMARY:

The combination of skills in data extraction, analysis and visualization is highly marketable in both industry and academia. This Postdoctoral position is an excellent stepping stone to a career as a data scientist and visual analytics expert. The candidate will work within a dynamic lab with a proven track record of outstanding achievements and contributions in visual analytics research, including an internship opportunity through the NSERC ENGAGE program.

This position's focus in the lab will include a number of partnered research themes within the Visual Analytics Laboratory. These include the exploration of heads-up display visualization systems in collaboration with our industry partner *The Globe and Mail*; multi-variant data display and tangible user interfaces in collaboration with industry partners such as *N-Logic*; and various public agencies.

The Postdoctoral Fellow (PDF) will be expected to lead software development and will be responsible for managing the project. Their management duties will include creating and managing an overall work-flow for projects, delegating tasks to student research assistants, supervising student work, and documenting the project's development through periodic reports. They will lead in the design and implementation of visualization strategies and relevant algorithms. Furthermore, the PDF is expected to disseminate their research findings through academic conferences, industry presentations, and peer-reviewed publications, working in concert with the Principal Investigator and research assistants.

The PDF will provide the Visual Analytics Lab with much needed expertise in Visualization Design and computation, while at the same time, the PDF will benefit from the unique experience of being immersed with an art and design university. Student researchers will bring strong design skills but will require supervision to amplify existing and new programming knowledge. The successful candidate for this position will have a leadership role in this project in collaboration with the Principal Investigator (Dr. Sara Diamond).

The Postdoctoral Fellow will play a leadership role in the Visual Analytics Lab, reporting directly to Dr. Sara Diamond (University President and Principal Investigator of the lab).

SUMMARY OF RESPONSIBILITIES:

- Lead the development of data analytics and visualization software.
- Provide HCI, visualization and design capacity to visualization projects.
- Conduct literature reviews and keep abreast of newest developments in the field.
- Manage and supervise graduate and undergraduate research assistants.
- Present results at academic conferences and industry meetings, prepare and publish peer-reviewed articles, and participate in the preparation of grant application packages.
- Work with the Lab Manager and other personnel.
- Collaborate with Principal Investigator to lead research.
- Develop research grant applications with PI.
- Develop collaborations with other institutions.
- Respond to and develop visualization projects with new industry partners.
- Engage in NSERC CREATE workshops, boot camps, lab rotation and industry internship.

QUALIFICATIONS:

- PhD degree in computer science or related field (graduated with a PhD on or after June, 2012 or will graduate with PhD by September, 2017).

- Advanced data visualization skills.
- Experience with data visualization software (using D3, and commercial visualization tools).
- Comfort working with version control software (such as Git).
- Understanding of design thinking principles.
- Ability to mentor students.
- Effective oral and written communication, analytical, and interpersonal skills.
- Excellent organizational skills and the ability to learn new skills quickly.
- Demonstrated ability to work independently and participate collaboratively in a team environment.
- Accuracy and attention to detail.

SUPERVISION:

- Works independently under direction of PI, Dr. Sara Diamond
Work directly with industry partner (The Globe and Mail)
Opportunities to work collaboratively on other Visual Analytics Lab research projects and with other researchers at OCAD University

ABOUT THE VISUAL ANALYTICS LAB (VAL):

The Visual Analytics Lab (VAL) at OCAD U is focused on innovation and training in information, and scientific visualizations and visual analytics. Driven by the increasing complexity of data sets and the need for visualization of both data and information the VAL's team of researchers, designers, artists, cultural theorists, graphics specialists and software developers, invent new visual metaphors, create analysis algorithms, deliver prototypes and research outcomes that strive to make complex data meaningful by skilful visual designs, compelling interaction, sound analytic methods, and solid engineering. The VAL collaborates with local experts, international and industry partners with projects that span urban and transportation issues, financial and health care services, publishing, social media and the entertainment sector.

VAL's research and development activities focus on four main areas:

- *Visual Design:* Developing new ways to tell stories with data through unique visual representations is the key research focus of the lab. Depiction of complex patterns and relationships through appealing visuals enables better information delivery.
- *Analytic Methods:* VAL's researchers' designs software and methods that guide users in exploring and gaining valuable information from visual representations. By these visualizations, users can create and test hypotheses, communicate results, and challenge assumptions.
- *Natural User Interactions:* At VAL, the team explores emerging multimodal techniques and hardware for developing natural interfaces that brings users closer to their data than ever before. The team creates new interactive visual environments for the web, mobile devices, and desktop applications.
- *User Experience:* The ultimate goal of VAL is to help people work with information. The user-centered design approach used in the lab includes collaborating closely with users to understand their problems, test solutions, and deliver usable and useful software products.

For more information, please visit <https://www2.ocadu.ca/research/val/home> or contact Dr. Sara Diamond (sdiamond@ocadu.ca) or Dr. Steve Szigeti (sszigeti@ocadu.ca)

COMPENSATION: \$55,000 per annum, plus benefits.

HOURS OF WORK: Full-time; Grant funded, Monday to Friday for a total of 35 hours per week. The expected duration of this contract is 18 to 24 months, beginning in Summer/early Fall, 2017.

APPLICATION DEADLINE: Position will remain open until filled (review of applications will commence on receipt.) Applicants should provide a one page covering letter indicating their research interests and highlighting their strengths, an academic C.V. and three references.

As an institution committed to art, design, digital media and related scholarship, OCAD University recognizes the profound and essential value that diversity brings to the creation, reception and circulation of creative practices and

discourse. OCAD University understands that valuing diverse creative practices and forms of knowledge are essential to, and enrich the institution's core mission and vision as an art and design university with a local and global scope.

As an employer committed to employment equity, we encourage applications from members of equity-seeking communities including women, racialized and Indigenous persons, persons with disabilities, and persons of all sexual orientations and gender identities/expressions. **We encourage members of equity-seeking groups to self-identify within their letter of intent in their application.**

OCAD University is committed to providing an inclusive and barrier free experience to applicants with accessibility needs. Requests for accommodation can be made at any stage during the recruitment process. Please [contact](#) Human Resources for more information or refer to [OCAD U's Policy of Accommodation in Employment for Persons with Disabilities](#)