



<b>Job title</b>	<i>Research Scientist</i>
<b>Reports to</b>	<i>Director of Software and Data Engineering</i>

### **Job purpose**

This position is in the Kyulux North America (KNA), which is the Software and Data engineering department of Kyulux, Inc. KNA is responsible for developing software tools; performing high through virtual screening with quantum chemistry and cheminformatics; using machine learning and data science on theoretical and experimental data with the goal of discovering new materials for OLED displays alongside our colleagues in the lab. Your job is to push forward our science with an approach that leverages scientific intuition, evidence-based reasoning, practicality and wrangling copious amounts data.

### **Duties and responsibilities**

- Use advanced statistical and data science concepts, combined with experimental/theoretical chemistry data, to answer scientific inquiries about materials
- Create and evaluate machine learning models to answer these scientific questions
- Clean messy data from disparate sources
- Design, write, & debug command line tools using the python programming language
- Use version control tools to collaborate on code with colleagues
- Document your work such that colleagues can use your tools unattended or repeat your scientific inquiry, such as in a Jupyter notebook, slide deck, or documentation
- Present work periodically on evening video calls with team in Japan or in person with local team

### **Qualifications**

- Ph.D. or similar experience in chemistry, physics, or related fields
- Profound understanding in organic electronic devices; experience in electrical simulation via drift diffusion model will be a huge plus
- At least 2 years of experience in python programming
- Project based work that demonstrates proficiency in data science concepts
- Evidence of effective verbal and written and communication skills, for example, experience giving seminars and writing peer-reviewed scientific papers

#### Preferred Skills

- Experience in fabrication of organic electronic devices
- Basic understanding of organic chemistry
- Version control with git or similar
- Understanding of neural networks (hands-on experience a plus)
- Database querying using Django or SQL; understanding of relational databases
- Scientific computing packages including numpy, pandas, scipy, matplotlib (or other plotting favorite), jupyter notebook
- Machine learning packages such as scikit-learn

### **Working conditions**

40 hour work week mostly in downtown Boston office excepting 2-3 hours a week from home to participate in weekly phone calls with Japan (approx. 8pm). Travel to Japan is an option but not required.