The Spatial Computing Lab (SCLab) in the Spatial Sciences Institute (SSI) at the University of Southern California (USC) invites applicants for a postdoctoral scholar position under the Taiwan-USC Postdoctoral Fellowship program. We are a diversified, interdisciplinary research lab including Ph.D. students in Computer Science and in Population, Health, and Place, M.S. students in Data Science, Spatial Data Science, and Computer Science. Our research focus lies at the intersection of computer science and spatial sciences where we build algorithms and applications for discovering, collecting, fusing, and analyzing data from heterogeneous sources to solve real-world problems (see http://spatial-computing.github.io). For example, we are pioneering digital map processing technologies to unlock historical geographic information from maps. Our open source software, Strabo, "reads" scanned maps for automatically identifying historical locations of places. Also, in a unique collaboration with USC Information Sciences Institute and the Keck Medical School, we are developing data mining algorithms and a system for automatic predictions of fine-scale air pollutant concentrations. We are also working with the USC Integrated Media System Center to develop and maintain the largest real-time traffic database and novel algorithms for processing large time series data (e.g., traffic prediction and forecasting).

SCLab seeks a talented, self-motivated postdoctoral scholar to develop scientific algorithms and tools in Data Integration, Computer Vision, Machine Learning, Data Mining, and GIScience. A successful candidate for this position will have 1) a degree in Computer Science, Spatial Sciences/GIScience, or a related field, 2) a strong track record in the research and development of scientific software and systems, and 3) experience in leading and managing software development projects. The preferred technical skills include experience with: 1) Scala, 2) Spark (and SparkML), 3) Python, 4) PostgreSQL (and PostGIS), and 5) QGIS/Esri ArcMap; experience with additional machine learning and computer vision toolkits such as OpenCV, TensorFlow, or Theano is a bonus.

Thanks,
Yao-Yi

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