

SUMMARY

- PhD in Spatial Analysis.
- Quantitative researcher with extensive knowledge and skills in data mining, machine learning, operations research, mathematical programming, statistical analysis, math modeling, and simulation.
- 8 years of hands-on experience with healthcare data.
- Passionate problem solver and fast learner.
- Trusted business partner, thought leader, and team player.
- Chinese/French Native Speaker, English (Toiec 885)

PROFESSIONAL EXPERIENCE

- **Sr. Data Analyst / Quantitative research engineer, *Ecole des hautes études en santé publique (EHESP)*. Apr. 2014 – Present**
 - Provide actionable, strategic recommendations using data mining and machine learning techniques to improve efficiency of hospitals' Information Systems (The hospital is now realizing a 21% increase in lab utilization and a 41% decrease in overtime).
 - Collaborate with researchers, engineers, and physician. Provide optimised organizational initiative.
 - Introduction of a specific training program for physicians who want use their hospital databases.
 - Examples of work :
 - Developed a simulation model to compare the effectiveness of alternative strategies in the multi-criteria decision environment and provided recommendations
 - Improving the process efficiency of catheterization laboratories using simulation
 - Develop a multi-objective optimization framework for planning and prioritization
 - Patient path prediction – use machine learning models to predict the patient path
 - Patient churn prediction and prevention
- **Computer engineer / Database expert, *Ecole des hautes études en santé publique (EHESP)*. Jan. 2010 – Mar 2014**
 - Manage projects through ideation, data gathering, analysis, modeling and communication.
 - Examples of work:
 - Development and prototyping of recommender systems for patient path optimization
 - Development of marketplace displacement models and their applications
 - Patient transfers behavioral analysis
 - Emergency Department crowding problem. Identified the most critical components.
 - Provided recommendations to alleviate the situation based on analyses, such as bed reallocation and realized benefits

TECHNICAL CAPABILITIES

- MYSQL, Python, R, NOSQL, C++, C, Arcgis, Excel VBA, SAS, machine learning.

EDUCATION

Ph.D. (continuing education)	Université Rennes I, France Spatial Analysis and Massive healthcare databases	2013-2017
Computer Engineer	INSA de Rennes, France.	2006-2009
Business Engineer	École supérieure de commerce de Rennes, France	2008-2009
Licence 1&2.	MASS, Université Rennes II, France	2004-2006

PUBLICATIONS AND PRESENTATIONS

- Gao F, Kihal W, Le Meur N, Souris M, Deguen S. Does the edge effect impact on the measure of spatial accessibility to healthcare providers? International Journal of Health Geographics. 2017; 16: 46. DOI: 10.1186/s12942-017-0119-3.
- Gao F, Kihal W, Le Meur N, Souris M, Deguen S. Assessment of the spatial accessibility to health professionals at French census block level. Int J Equity Health. 2016;15(1):125.
- Le Meur N, Ferrat L, Gao F, Quidu F, Louazel M. Maillage territorial des établissements de santé: apport des modèles issus de la théorie des graphes. Journal de Gestion et d'Economie Médicale. Accepté Décembre 2017.
- Le Meur N, Gao F, Bayat S. Mining care trajectories using health administrative information systems: the use of state sequence analysis to assess disparities in prenatal care consumption. BMC Health Serv Res. 2015; 15: 200. doi: 10.1186/s12913-015-0857-5.
- Kovess V, Choppin S, Gao F, Pivette M, Husky M, Leray E. Psychotropic medication use in French children and adolescents. J Child Adolesc Psychopharmacol. 2015 Mar;25(2):168-75. doi: 10.1089/cap.2014.0058.
- Istvan M, Bayat S, Gao F, Grimaud O. Profil des patients atteints d'AVC admis en unités neuro-vasculaires entre 2009 et 2014 en France. Communication orale au congrès Emois 2013.
- Choppin S, Leray E, Gao F, Kovess V. Utilisation de psychotropes chez les enfants et adolescents français en 2010 à partir de l'échantillon des bénéficiaires (EGB), Oct 2013. Revue d'Épidémiologie et de Santé Publique.
- Gao F, Le Meur N, Mdidech N, Massiot G, Bayat S, Gasquet G, Deguen S. Rôle de l'offre de soins et de l'environnement socio-économique dans le parcours de soins des femmes enceintes : étude pilote. Communication orale au congrès Emois 2013.
- Le Meur N, Gao F, Mdidech N, Massiot G, Bayat S, Gasquet G, Deguen S. Disparités des trajectoires de recours aux soins des femmes enceintes au regard de leur environnement socio-économique. Communication orale au congrès Emois 2013.