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SUMMARY OF QUALIFICATIONS

- Statistical consulting in academia and business
- Teaching statistics for graduate students and researchers
- Statistical methods: optimization, computer design of experiment, data visualization, GLM, time series methods, multivariate data analysis, sampling designs, Bayesian learning, thermodynamic integration, model selection
- Abilities in the field of database modeling, data manipulation and comparison, development of data processing routines and automated procedures for logical data editing, clearing and imputation
- Advanced skills in SQL, VB.NET, XML, ASP.NET, R, STATA, MATLAB, UNIX, MS Access, MS Excel, EViews, SPSS, JMP, Reporting Services SQL, AWS Services (EC2), GitHub
- Over three years experience as a university teaching assistant, running tutorials
- Over four years experience as a research assistant, implementing and testing new ideas
- Over 7 years of professional experience as a SQL database developer in official statistical office
- 1.5 years experience in software development for accounting purposes
- Competence in training employees acquired during the Population Census and daily work as a programmer
- Ability to analyze and resolve problems quickly, efficiently, and collaboratively
- Capability to work in a team-based environment and to build, manage and maintain high-quality relationships
- Capacity to effectively manage multiple tasks, prioritize tasks and work effectively under pressure to meet deadlines, highly motivated with an ability to show initiative
- Aptitude to deal with a diversity of people in a calm and polite manner

EDUCATION

Doctor of Philosophy in Statistics	**2012 – 2017**

Faculty of science
Department of Statistics and Actuarial Science
Simon Fraser University
British Columbia, Canada

Master of Science in Statistical methods for business and economics	**2011**

Faculty of Economics
Department of mathematics and statistics
Ss Cyril and Methodius University
Skopje, Macedonia

Bachelor of Science in Mathematics	**2003**

Faculty of Natural Sciences and Mathematics
Department of Mathematics
Ss Cyril and Methodius University
Skopje, Macedonia

PROFESSIONAL EXPERIENCE

Statistical Consultant	**June 2017 – present**

Department of Statistics
University of British Columbia
British Columbia Canada

- Providing support for investigators on various research grants including local companies

- Grant proposal development: study design, sample size calculation, determining the appropriate statistical methodology, translating scientific research questions into statistical questions
- Data analysis: Survey studies, observational studies, controlled experiments, clinical trials, repeated measurements and longitudinal data, Survival data
- Examples of models used: Generalized linear models for count, continuous and binary data, Fixed effects and mixed effects models, Survival proportional hazards models, principal components and Factor analysis
- Data management: Data wrangling and cleaning, combining data from multiple sources
- Communicating results to the clients via written reports and verbally
- Teaching statistics for graduate students and researchers:
  - Lectures on statistical concepts through live webinars
  - Hands-on workshops for R statistical software - introductory and advanced level
- Mentoring statistical graduate students in consulting

Teaching Assistant   **Sep 2012 – Aug 2016**
Department of Statistics and Actuarial Science,
Simon Fraser University,
British Columbia, Canada.

- Tutoring for introductory and intermediate statistics courses, grading assignments and exams using R, SPSS, JMP
- Running tutorials for the Multivariate Data Analysis (multivariate regression, factor analysis, principal component analysis, clustering algorithms, correspondence analysis, multivariate scaling), demonstration labs mostly done in R
- Tutoring the Time Series Analysis (linear regression for time series, ARIMA processes) using R
- Running tutorials for Stochastic Processes (probability models, Poisson process, Monte Carlo methods)
- Running tutorials for Sampling Designs (Simple Random, Stratified, Cluster, Systematic, Network sampling design)

Research Assistant (Phd Thesis work)   **Sep 2012 – Apr 2017**
Department of Statistics and Actuarial Science,
Simon Fraser University,
British Columbia, Canada
- Research on Bayesian Networks computational methods in biochemical setting: Sequential Monte Carlo to learn the network parameters (R and UNIX).
- Extension of the BIC model selection abilities to the cases where the model exhibits multimodality (R and UNIX).
- Modeling the user behavior in chat messages – a joint project with MITACS Accelerate and industry (R and Cloud Computing).
- Improved sampling abilities of the Incremental Mixture Importance Sampling with Optimization to the cases where the target posterior is highly multimodal and prior does not cover the full target posterior surface (R and UNIX).
- Research on Bayesian computational methods: improved the efficiency of the standard Simulated Tempering algorithm, involving optimization, data visualization, thermodynamic integration for model comparison and selection (R and UNIX).
- Research on comparison (simulation study) of methods for parameter estimation in ordinary differential equation models: nonlinear regression, two stage kernel smoothing, Generalized Profiling, Sequential Monte Carlo, Smooth Functional tempering, basic MCMC, involving data visualization, using R, MATLAB and UNIX.
- Research on statistical methods for analyzing genetic data using simulated data involving logistic regression for the data simulation, data visualization, SNPs detection along a genome susceptible to a certain disease (R and UNIX).
- Graduate course work on combining R with C++ and R with C, C++ alone acquired through the specialized course from the computing department at SFU.

Data Scientist   **May 2015 – Sep 2015**
Mitacs Accelerate Research Internship
Community Sift, Kelowna, BC, Canada
- Conducted research in industrial setting
- Developed a statistical methodology to model the user behavior when they communicate online while playing video

games
- Applied stochastic process to model the user behavior and then clustered the users into groups based on their behavior
  The result: identified several patterns of user behavior

Relational database developer   **Nov 2005 – Sep 2012**
State Statistical Office,
Macedonia
- Designed, developed and maintained the national relational database system for Statistical Business Register (SBR) using SQL, XML,VB.NET, Reporting Services SQL
- Research, analyzed available data sources, relating and integrating them into a unified SBR relational database model.
- Developed a protocol for updating the SBR in compliance with the European Statistical Office (EUROSTAT) regulations.
- Developed and maintained an intranet application in ASP.NET using VB.NET and SQL
- Prepared algorithms for derivation of auxiliary variables as part of Population Census data processing utilized for data cleaning, data quality control and simplifying the data dissemination and tabulation process using SQL and Reporting Services SQL
- Field work: Instructed and supervised the implementation of Population Census data collection protocol, ensuring that Population Census rules were conducted in accordance with Population Census law and methodological guidelines

Master Thesis Work   **Oct 2009 – Jul 2011**
Faculty of Economics, Ss Cyril and Methodius University
Skopje, Macedonia
- Conducted a data analysis on longitudinal data from most of the European countries involving testing for cointegration (long-run relationship) between Public Expenditure and Gross Domestic Production, data were modeled using Error Correction model (with help of STATA and EViews)

Software developer   **Apr 2003 – Nov 2005**
Software Company, Skopje Macedonia
- Designed, developed and maintained software applications for accounting purposes using MS SQL, VB.NET, XML.

MANUSCRIPTS
- Stojkova J. B. and Campbell A.D. (2017) Simulated Tempering without normalizing constants (submitted, in peer review process)
- Stojkova J. B. and Campbell A.D. (2017) Incremental Mixture Importance Sampling with Shotgun Optimization (submitted, in peer review process)
- Stojkova J. B. , Sivak A. D, Campbell A.D. and Babcock N. (2017) Bayesian Information Criteria for Multimodal distributions (in preparation)
- Michael D. Grosskopf, Biljana J. Stojkova, Luyao Lin, David C. Clarke, LiangLiang Wang, Derek Bingham, David A. Campbell (2017) A Sequential Monte Carlo method for probabilistic inference in constrained fuzzy logic models (in preparation)
- Smith G., Szefer E., Xiong Y., Stojkova J. B. and Campbell D. (2013) When the Model Does What it is Supposed to Do but Not What You Intend (graduate course work)

CONFERENCES AND WORKSHOPS
Presented:
- Contributed talk on estimating parameters in epidemiological model via Simulated Tempering Without Normalizing Constants at International Biometric Conference, Victoria, BC, Canada, 2016
- Contributed talk on Simulated Tempering Without Normalizing Constants at Statistical Society of Canada annual meeting, Dalhousie University, Halifax, Canada, 2015
- Talk on Simulated Tempering Without Normalizing Constants at joint UBC-SFU graduate student seminar, Vancouver, Canada, 2014
- Poster presentation at Workshop on Coalescent Theory, University of Montreal, Montreal, 2013
- Presentation at Balkan-Swedish Summer Schools for Survey Methodology, Albania 2009, Serbia 2010

Attended:

- Statistical Society of Canada annual meeting, University of Alberta, Edmonton, 2013
- Workshop on Population Genetics Data Analysis, 18th Summer Institute in Statistical Genetics, University of Washington, Seattle, 2013
- Workshop on Statistical Data and Meta Data Exchange (SDMX) system for .NET developers, EUROSTAT, Luxembourg, 2010
- Study visit on Statistical Agricultural Register protocols and rules, Hungarian Central Statistical Office, Budapest, 2009
- Study visit on SBR protocols and rules, Czech Statistical Office, Prague, 2007
- Professional Microsoft courses (SQL, ASP.NET, VB.NET, Reporting Services SQL)

SCHOLARSHIPS AND AWARDS

- Mitacs accelerate internship grant, Summer 2015
- Graduate Fellowship from SFU, 2016, 2014, 2013
- Travel award to attend the Statistical Society of Canada annual meeting, Dalhousie University, Halifax, 2015
- Travel award to attend the 18th Summer Institute in Statistical Genetics at University of Washington, Seattle, 2013
- Travel award to attend A Workshop on Coalescent Theory at University of Montreal, Montreal, 2013
- Special Graduate Entrance Scholarship from SFU, 2012

REFERENCES

Available upon request