Job Description			
Job Title	BIOSTATS RDE II	**Job Code**	9151
Division/Function	Biostatistics & Computational Biology	**Career Level/ Grade Level**	Postdoctoral researcher
Reports To	Dr. Sam Norman-Haignere	**FLSA**	

GENERAL PURPOSE

The General Purpose provides a concise, high level overview of the role, level, and scope of responsibility consisting of 3-4 sentences. It provides a basic understanding of the job and a concise summary of why the job exists and how it makes an impact.

The individual will be involved in building computational encoding models using functional MRI and intracranial electrophysiology data. They will be required to synthesized sounds from deep neural network encoding models and comparing them against neural responses to these stimuli. They will also be combining the predictive power of modern deep neural network encoding models with interpretability of statistical component models.

JOB DUTIES AND RESPONSIBILITIES

This section contains a description of the 4-7 separate duties and responsibilities that make up the position. Assign each responsibility a percentage of time (increments of 5% and generally no one responsibility greater than 25%) to total 100%. Select an indicator (Y/N) for essential function and remote work. Job Duties should be listed in order of percentage of time, with highest percentage first. When estimating percentage of time, it can be considered that 10% of a week is 5 hours or 5 weeks in a year.

Responsibility	% of Time Spent (Must total 100%)	Essential* Function (Y/N)	Can Be Performed Remotely (Y/N)
Analysing functional MRI data	30	Y	
Analyzing intracranial electrophysiology data	30	Y	
Model development	30	Y	
Conducting fMRI and intracranial experiments	10		N
Other duties as assigned			

**Essential functions are those functions that the individual who holds or desires the position must be able to perform with or without a reasonable accommodation. A job function may be deemed essential based upon several factors such as whether: 1. the position exists for performance of the function; 2. the number of employees available who can perform the function and limitations on the ability to reassign it; or 3. the degree of skill or expertise required to perform the function.*

QUALIFICATIONS

This section lists the level of job knowledge (such as education, experience, knowledge, skills and abilities) necessary to do this job and whether it is required or preferred. Required qualifications are the minimum level of qualifications needed to perform this job. Preferred qualifications are "nice to have", but are not essential to the day-to-day functions of the job.

	Description	Required/Preferred
Minimum Education	Ph.D.	Required
Experience	Requires experience with fitting encoding models and analyzing fMRI and intracranial electrophysiology recordings.	Required
Knowledge, Skills & Abilities	Ability to work with modern deep neural network audio models. Knowledgable about latent variable component models.	Required
Certification	None	None

JOB SCOPE

*Place an "X" next to the **ONE** statement that applies the majority of the time in each category.*

Critical Thinking	
	Basic level of problem solving ability. Follows policies and procedures where facts are readily available.
	Moderate level of problem solving ability. Gathers and interprets data to solve routine problems that require verification. Some independent judgement required.
	Independent level of problem solving ability. Resolves semi-complex problems that require independent judgement.
x	High level of problem solving ability. Integrates and interprets data from diverse sources to find solutions to very complex problems.
Freedom to Act	
	Work is closely managed and reviewed for accuracy and adequacy. Follows specific, outlined and detailed instructions.
	Work is accomplished with moderate supervision. Follows established and detailed directions. Work is reviewed for accuracy and overall adequacy.
x	Work is accomplished with limited direction. Determines and develops approach to solutions. Work is evaluated upon completion to ensure objectives have been met.
	Work is accomplished without considerable direction. Exercises judgement in selecting methods, techniques, and evaluation criteria in obtaining results. Exerts significant latitude in determining objective of assignment. Takes calculated risks with consultation from an expert.
	Works with minimal direction toward predetermined long-range goals. Acts independently to determine methods and procedures on new or special assignments. Determines and pursues courses of action essential in obtaining desired results. Takes calculated risks.
Supervision of others *(including hire/fire)*	
	No supervisory responsibility
x	Non-supervisory leader (Example: team leader, coordinator, or mentor)
	Supervisory (two or more fulltime direct reports or equivalent)
Planning	
	Executes goals and objectives established by supervisor or manager.
x	Develops individual goals and sets individual daily priorities and tasks. Goals and objectives are monitored by supervisor or manager.
	Develops and executes goals and objectives for a department or functional group. Recommends and gives input to strategic initiatives.
	Creates business strategies for long-term strategic objectives. Monitors results of initiatives.
Consequence of Error	
	Failure to accomplish results can normally be overcome without significant effect on the organization.
x	Failure to achieve results or erroneous judgements may require allocation of additional resources to correct and/or achieve goals.
	Failure to obtain results or erroneous judgements or recommendations would normally have serious results and may require substantial expenditure of resources to correct and/or achieve goals.
	Erroneous decisions or recommendations would normally result in the inability to reach crucial organizational objectives and may have prolonged effect, as well as the expenditure of substantial resources.
	Erroneous decisions or recommendations would normally result in failure to reach goals crucial to significant organizational objectives and would profoundly affect the image of the organization.
Financial Responsibility *(Please check all that apply)*	
	Signing responsibility
	Manage pre-determined budget
	Independent judgement and responsibility to develop employer or departmental budget
	Responsible for revenue generating processes less than or equal to $1M
	Responsible for revenue generating processes $1M to $5M
	Responsible for revenue generating processes greater than $5M
	Independent judgement and authority to commit the employer in matters of significant financial impact

PHYSICAL/SENSORY REQUIREMENTS AND WORKING ENVIRONMENT		
Indicate the physical/sensory requirement for each activity. Also indicate weight requirements where applicable		
Activity	**Rarely, Occasionally, Frequently, Continuously or N/A****	**Weight*****
Stationary Standing	N/A	
Sitting	F	
Walking	O	
Crawling	N/A	
Balancing	N/A	
Lifting/Carrying	N/A	
Pushing/Pulling	N/A	
Bending	N/A	
Squatting	N/A	
Kneeling	N/A	
Twisting/Turning	N/A	
Climb	N/A	
Stoop	N/A	
Overhead Reaching	N/A	
Typing/Keyboarding	F	
Driving (car/equipment)	N/A	
Critical Thinking/Organization	F	
Talking on Phone	O	
Talking in Person	O	
Hearing in Person	O	

****Key to frequency codes:**

R = Rarely (less than 0.5 hours per day)
O = Occasionally (0.6 - 2.5 hours per day)
F = Frequently (2.6 - 5.5 hours per day)
C = Continually (5.6 - 8.0 hours per day)
N/A = Not Applicable

***Weight: Up to 10lbs; Up to 20lbs; Up 35lbs; Up to 50lbs; Greater than 50lbs

UNIVERSITY of ROCHESTER

Hazard Assessment

*Please enter a "Y" next to any hazard that this job is subjected to in a **normal** workday*

Hazard Present (Y/N)	Hazard Type	Hazard Description
N	**Chemical**	**Toxic:** A chemical that exposes a person by absorption through the skin, inhalation, or through the blood stream that causes illness, disease, or death. The amount of chemical exposure is critical in determining hazardous effects. 1910.1000 for chemical hazard information. **Flammable:** A chemical that, when exposed to a heat ignition source, results in combustion. Typically, the lower a chemical's flash point and boiling point, the more flammable the chemical. Check MSDS for flammability information **Corrosive:** A chemical that, when it comes into contact with skin, metal, or other materials, damages the materials. Acids and bases are examples of corrosives.
N	**Explosion**	**Chemical Reaction**: Self-explanatory **Over Pressurization**: Sudden and violent release of a large amount of gas/energy due to a significant pressure difference such as rupture in a boiler or compressed gas cylinder.
N	**Electrical**	**Shock/Short Circuit:** Contact with exposed conductors or a device that is incorrectly or inadvertently grounded, such as when a metal ladder comes into contact with power lines. 60Hz alternating current (common house current) is very dangerous because it can stop the heart. **Fire:** Use of electrical power that results in electrical overheating or arcing to the point of combustion or ignition of flammables, or electrical component damage. **Static/ESD:** The moving or rubbing of wool, nylon, other synthetic fibers, and even flowing liquids can generate static electricity. This creates an excess or deficiency of electrons on the surface of material that discharges (spark) to the ground resulting in the ignition of flammables or damage to electronics or the body's nervous system. **Loss of Power**: Critical equipment failure as a result of loss of power.
N	**Ergonomics**	**Strain**: Damage of tissue due to overexertion (strains and sprains) or repetitive motion. **Human Error**: A system design, procedure, or equipment that is error-provocative. (A switch goes up to turn something off).
N	**Excavation** (Collapse)	Soil collapse in a trench or excavation as a result of improper or inadequate shoring. Soil type is critical in determining the hazard likelihood.
N	**Fall** (Slip, Trip)	Conditions that result in falls (impacts) from height or traditional walking surfaces (such as slippery floors, poor housekeeping, uneven walking surfaces, exposed ledges, etc.)
N	**Fire/Heat**	Temperatures that can cause burns to the skin or damage to other organs. Fires require heat source, fuel, and oxygen
N	**Mechanical/ Vibration** (Chaffing/ Fatigue)	Vibration that can cause damage to nerve endings or material fatigue that results in a safety-critical failure. (Examples are abraded slings and ropes, weakened hoses and belts.)
N	**Mechanical Failure**	Self-explanatory; typically occurs when devices exceed designed capacity or are inadequately maintained.
N	**Mechanical**	Skin, muscle, or body part exposed to crushing, caught-between, cutting, tearing, shearing items or equipment.
N	**Noise**	Noise levels (>85 dBA 8 hr TWA) that result in hearing damage or inability to communicate safety-critical information
N	**Radiation**	**Ionizing:** Alpha, Beta, Gamma, neutral particles, and X-rays that cause injury (tissue damage) by ionization of cellular components. **Non-Ionizing**: Ultraviolet, visible light, infrared, and microwaves that cause injury to tissue by thermal or photochemical means.
N	**Struck by** (Mass Acceleration)	Accelerated mass that strikes the body causing injury or death. (Examples are falling objects and projectiles.)
N	**Struck Against**	Injury to a body part as a result of coming into contact of a surface in which action was initiated by the person. (An example is when a screwdriver slips.)
N	**Temperature Extreme** (Heat/Cold)	Temperatures that result in heat stress, exhaustion, or metabolic slow down such as hypothermia.
N	**Visibility**	Lack of lighting or obstructed vision that results in an error or other hazard.
N	**Weather**	Phenomena (Snow/Rain/ Wind/Ice) Self-explanatory.

Approvals	Signature	Date
HR Business Partner:		
Compensation Analyst:		
Approver:		