

$F$	3 dimensional flow matrix
$f_{i,j,k}$	Flow on day $i$ , time slot $j$ and location $k$
$nLoc$	Number of locations where charging stations are located.
$L \in \{1, 2, \dots, L\}$	Layers of neural network, $L$ total number of layers
$x_i, y_i$	$i_{th}$ instance of input and output vector
$w_{j,i}^l$	Weight between $j_{th}$ neuron in layer $l$ and $i_{th}$ neuron in layer $l - 1$
$net_j^l$	Net input to $j_{th}$ neuron in layer $l$
$o_i^{l-1}$	Output of $i_{th}$ neuron in layer $l - 1$
$f$	Activation function
$E$	Error
$\delta w_{j,i}^l$	Incremental change in weight
$\eta$	Learning rate
$p, q, r$	Coordinates of flow matrix where traffic need to be predicted
$l, n$	Historical $l$ and $n$ time slots
$m$	Spatial locations
$s$	Historical weeks
$I, Y$	Input and target output matrix
$IO$	number of elements in input or target output matrix
$iter$	Number of iterations
$n_h^l$	Number of neurons in hidden layer $l$

$N$	Number of charging requests
$M$	Number of charging stations
$l_j^c$	Location of $j_{th}$ charging station
$R_i^t$	$i_{th}$ PEV request made at time $t$
$t_i$	Time at which request $i$ is generated
$l_i$	Location of PEV $i$ when request is made
$\gamma_i$	Direction of travel for request $i$
$s_i^{avg}$	Average speed of PEV with request $i$
$SOC_i^{curr} \sim SOC_i^{min}, SOC_i^{req}$	Current, minimum, and required status of charge for PEV
$r_i^{dc}$	Rate of discharge for PEV $i$
$d_i^{max}$	Maximum distance a PEV can travel with current status of charge
$\tau$	Optimization interval
$\tau_n$	Time slot at which PEV reaches $j_{th}$ charging station
$\tau_{j,n}^w$	Wait time at $j_{th}$ charging station at time slot $n$
$r_j^c$	Charging rate of EVSE at charging station $j$
$T_{\{i,j\}}$	Sum of travel time and wait time for PEV $i$ at charging station $j$
$M_i$	Set of potential charging stations for request $R_i^t$
$M$	Tuple containing every $M_i$
$t_c^{i,j}$	Effective charging time of $i_{th}$ request in $j_{th}$ element of potential stations
$N_a^i$	Assigned station to request $i$
$S_a$	Set of assigned station