The Results

Lang.	Precision	Recall	F1 score
Bash	0.94	0.87	0.90
C	0.86	0.96	0.90
C#	0.80	0.89	0.84
C++	0.83	0.76	0.79
CSS	0.77	0.91	0.83
Haskell	0.95	0.97	0.96
HTML	0.64	0.63	0.63
Java	0.89	0.75	0.81
Javascript	0.91	0.87	0.89
Lua	0.78	0.80	0.79
Markdown	0.98	0.96	0.97
Objective-C	0.98	0.93	0.96
Perl	0.97	0.66	0.78
PHP	0.93	0.94	0.94
Python	0.95	0.93	0.94
R	0.93	0.89	0.91
Ruby	0.92	0.82	0.87
Scala	0.90	0.90	0.90
SQL	0.92	0.91	0.91
Swift	0.98	0.95	0.96
VB.Net	0.79	0.94	0.86

Table 1: The Performance for RandomForest classifier trained on textual information and code snippet features.

Lang.	Precision	Recall	F1 score
Bash	0.72	0.58	0.64
C	0.78	0.93	0.85
C#	0.57	0.75	0.65
C++	0.54	0.46	0.50
CSS	0.75	0.90	0.82
Haskell	0.90	0.90	0.90
HTML	0.61	0.65	0.63
Java	0.68	0.57	0.62
Javascript	0.85	0.77	0.81
Lua	0.78	0.75	0.76
Markdown	0.90	0.86	0.88
Objective-C	0.95	0.87	0.91
Perl	0.95	0.83	0.88
PHP	0.80	0.79	0.79
Python	0.90	0.86	0.88
R	0.89	0.77	0.83
Ruby	0.86	0.78	0.82
Scala	0.78	0.82	0.80
SQL	0.85	0.81	0.83
Swift	0.94	0.89	0.91
VB.Net	0.73	0.93	0.82

Table 2: The Performance for RandomForest classifier trained on textual information features.

Lang.	Precision	Recall	F1 score
Bash	0.94	0.87	0.90
C	0.86	0.96	0.90
C#	0.80	0.89	0.84
C++	0.83	0.76	0.79
CSS	0.77	0.91	0.83
Haskell	0.95	0.97	0.96
HTML	0.64	0.63	0.63
Java	0.89	0.75	0.81
Javascript	0.91	0.87	0.89
Lua	0.78	0.80	0.79
Markdown	0.98	0.96	0.97
Objective-C	0.98	0.93	0.96
Perl	0.97	0.66	0.78
PHP	0.93	0.94	0.94
Python	0.95	0.93	0.94
R	0.93	0.89	0.91
Ruby	0.92	0.82	0.87
Scala	0.90	0.90	0.90
SQL	0.92	0.91	0.91
Swift	0.98	0.95	0.96
VB.Net	0.79	0.94	0.86

Table 3: The Performance for RandomForest classifier trained on code snippet features.

Lang.	Precision	Recall	F1 score
Bash	0.96	0.94	0.95
C	0.86	0.87	0.86
C#	0.89	0.93	0.91
C++	0.97	0.86	0.91
CSS	0.98	0.95	0.97
Haskell	0.98	0.96	0.97
HTML	0.69	0.69	0.69
Java	0.74	0.83	0.78
Lua	0.98	0.95	0.97
Markdown	0.80	0.87	0.83
Objective-C	0.91	0.87	0.89
Perl	0.94	0.91	0.92
PHP	0.85	0.79	0.82
Python	0.99	0.97	0.98
R	0.86	0.93	0.89
Ruby	0.89	0.88	0.89
Scala	0.93	0.92	0.92
SQL	0.80	0.80	0.80
Swift	0.94	0.93	0.94
VB.Net	0.95	0.89	0.92

Table 4: The Performance for XGBoot classifier trained on textual information and code snippet features.

Lang.	Precision	Recall	F1 score
Bash	0.94	0.86	0.90
C	0.85	0.84	0.85
C#	0.78	0.84	0.81
C++	0.95	0.84	0.90
CSS	0.95	0.86	0.91
Haskell	0.93	0.82	0.87
HTML	0.63	0.66	0.64
Java	0.47	0.61	0.53
Javascript	0.86	0.90	0.88
Lua	0.94	0.88	0.91
Markdown	0.50	0.78	0.61
Objective-C	0.88	0.78	0.83
Perl	0.91	0.80	0.85
PHP	0.68	0.61	0.64
Python	0.95	0.89	0.92
R	0.81	0.90	0.85
Ruby	0.85	0.80	0.83
Scala	0.88	0.82	0.85
SQL	0.78	0.75	0.76
Swift	0.81	0.82	0.81
VB.Net	0.75	0.60	0.67

Table 5: The Performance for XGBoot classifier trained on textual information features.

Lang.	Precision	Recall	F1 score
Bash	0.80	0.79	0.80
C	0.76	0.77	0.76
C#	0.77	0.84	0.80
C++	0.68	0.39	0.49
CSS	0.92	0.83	0.87
Haskell	0.92	0.88	0.90
HTML	0.56	0.57	0.57
Java	0.68	0.73	0.70
Javascript	0.80	0.81	0.80
Lua	0.88	0.85	0.86
Markdown	0.75	0.80	0.77
Objective-C	0.58	0.75	0.65
Perl	0.78	0.75	0.77
PHP	0.81	0.70	0.75
Python	0.92	0.86	0.89
R	0.74	0.83	0.78
Ruby	0.74	0.70	0.72
Scala	0.79	0.77	0.78
SQL	0.67	0.67	0.67
Swift	0.89	0.84	0.87
VB.Net	0.90	0.82	0.86

Table 6: The Performance for XGBoot classifier trained on code snippet features.